ABSTRACT

Title of Dissertation:	SOCIAL CATALYSTS AND SOCIAL GOAL PURSUIT
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People pursue goals but do not always successfully attain them. Existing theories of goal pursuit such as field theory and the goals-plans-actions model regard goal pursuit as a solitary activity that results either in success or frustrated failure. In stark contrast to this solitary-actor, sink-or-swim model of goal pursuit are observations from several social domains show that people ask other people to help them reach their goals instead of abandoning their goals entirely. This dissertation presents the quantitative findings from two studies of these helpers, and argues that analyzing and developing a theory of helpers is critical to a more complete and accurate model of goal pursuit. By introducing the constructs of resource improvement (helpers increase resources, diversify resources, and show their pursuers new paths around obstacles blocking goal pursuit) and the substi-

tutability of helpers' willingness and skills, this dissertation demonstrates the utility of unifying goal-pursuit theories with the social-support framework and situating those ideas in a social context. Study 1 reports an investigation of wingpeople, those offensive and defensive helpers (also called wingmen) who use communication to help people initiate or terminate initial romantic relationships. Key findings include that both offensive and defensive wingpeople use communication to help pursuers move toward a desired potential romantic partner and away from an undesirable one and that, in line with evolutionary psychological predications, wingpeople provided differential help to male and female pursuers. Notably, some participants in Study 1 spontaneously reported being helpers in social domains other than courtship. Study 2 investigated the generalizability of the helping phenomenon across social domains. Key findings include: participants reported being helpers in more than a dozen different social domains (e.g., academic, physical health, creative pursuits, and service) and more than 90% reported helping in domains other than courtship; participants used social support messages to improve their pursuers' resources; and no differences between offensive and defensive helpers were observed on the personality traits measured. This dissertation concludes by using the evidence from the studies to make a case for helpers as social catalysts.

SOCIAL CATALYSTS AND SOCIAL GOAL PURSUIT

by

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Dedication

For Roberta Siebert, my first social catalyst. Thank you.

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Introduction

I am the product of two extraordinary women and one determined social catalyst. When my biological mother found herself pregnant with me, she was young, working two jobs, and unsure she could offer me the opportunities she wanted me to have. So, my biological mother sought to find me a set of parents who could. Around that time, my adoptive mother, who had dreamed of being a mother since she was a child, found herself researching adoption agencies at her doctor's suggestion after a fourth ectopic pregnancy ended. Although they did not know it then, both women sought what was, before I was born, an impossible thing in the State of Nebraska: an open adoption.

Closed adoptions, so named because the legal records were sealed and unavailable to inquiring parties after the adoption was finalized, were the standard practice. Legislative bodies and courts decided that closed adoptions were the best way to uphold the parties' privacy, in part because there was then a social stigma about being an unwed mother and in part to make it nearly impossible for biological parents who had relinquished their parental rights to later seek custody of their biological children. In contrast, the records of open adoptions were not sealed, so inquiring parties could easily learn the identities of the biological and adoptive parents. In the time before my birth, only a few states had experimented with adoptions that had varying degrees of openness, and only a few adoption agencies were willing to participate in breaking new legal ground.

I would later learn that my biological and adoptive mothers shared many personality similarities, but two matter were crucial then. My biological mother could not bear the thought of not knowing how her child was doing, so she was determined to find an

adoption agency that would be willing to facilitate the first open adoption in the state. My adoptive mother could not bear the thought of not letting biological parents know how their child was doing, so she was determined to find an adoption agency that would be willing to facilitate the first open adoption in the state. Fortunately for us all, they both found Roberta Siebert, a plucky adoption agent who had long thought that closed adoptions did more harm than good for families and who was looking for parents willing to try an open adoption. In her role as an adoption agent, Roberta made a career out of removing the obstacles that prevented couples who wanted to adopt a child from finding people who wanted or needed to relinquish their parental rights. Roberta typically removed these obstacles to connection by helping would-be adoptive parents make informational videos about themselves for biological parents to watch, by screening those informational videos so that biological parents watched couples that were most compatible with their values and priorities, by working with parties' legal representatives to arrange the closed-adoption paperwork, and by providing emotional support to everyone involved. In my case, Roberta did more. Among other things, Roberta talked with her nurse friends to learn which hospital might be most amenable to being the location in which an open-adoption birth occurred, she consulted with her attorney friends to learn what legal obstacles my biological and adoptive parents might face and how to overcome them, and she helped prepare my biological and adoptive parents to face the hospital's full ethics board as it decided whether it could facilitate an open-adoption birth. Roberta championed my adoption and, as a result, helped bring about the first open adoption in the State of Nebraska.

Roberta's actions are important to my family and me on a deeply personal level:

Were it not for Roberta, my biological and adoptive parents would never have connected and would not have been able to support the relationship between biological parent and child they believed was so important. Roberta's actions are also important on a theoretical level, and restating her importance to my family and me illuminates how: Were it not for Roberta, *a social catalyst who removed the obstacles preventing my open adoption*, my biological and adoptive parents would never have connected and would not have been able to support the relationship between biological parent and child they believed was so important. *Social catalysts* are people who take on a helping role to assist others in overcoming obstacles to their goal pursuit that they were unable to overcome on their own. Social catalysts can assist this goal pursuit by, for example, showing the actors how to navigate around an obstacle (as Roberta did when she helped my parents prepare testimony to address and navigate around the challenges raised by the hospital's ethics board) or by removing the obstacle for them (as Roberta did when she introduced my biological and adoptive parents). In this way, we may say that Roberta catalyzed my open adoption: Without Roberta's transformative effects on my parents' goal pursuit, my open adoption would not have occurred. Additionally, Roberta was not the only social catalyst operating in the adoption domain at the time, nor do we find social catalysts only the adoption domain. In some domains, people face the same kinds of obstacles to their goal pursuit so regularly that we have special names for the social catalysts who take on a helping role: real estate agents help us overcome obstacles to finding and purchasing houses, tour guides help us remove obstacles to traveling around unfamiliar places, and arborists help us identify the insects or rusty patches that prevent us from having healthy orchards. Oth-

er social domains do not have such regularly encountered obstacles, so we do not necessarily have special names for the social catalysts we find in those domains. Instead, we might name social catalysts by our relationship to them: my brother, who helped me overcome the obstacle of my lack of strength so I could rearrange my furniture, or a kind stranger, who helped me overcome the obstacle of bewilderment by giving me directions so I could successfully meet my date at a new restaurant.

Although social catalysts are common in social life, current models of goal pursuit do not account for how social catalysts or how they help people reach goals. The goal of this dissertation, then, is to recognize, describe, and theorize about the importance of social catalysts and the role they play in our social world. The first chapter of this dissertation lays out the theoretical foundations of social catalysts by reviewing existing major theories of goal pursuit and describing their limitations as models of goal pursuit. The second chapter collects the scattered empirical evidence about social catalysts to show that social catalysts exist and to describe how social catalysts enable social goal pursuit. The third chapter distills the arguments in the first two chapters into the research questions and hypotheses that guide the two studies this dissertation reports. Chapter Four describes and reports the results of the first study, which is a focused study of social catalysts who operate in the courtship domain. Chapter Five describes and reports the results of the second study, which is a quantitative study that models how social catalysts operate across domains. The final chapter offers conclusions about social catalysts and suggestions for future research about them.

Chapter 1: Extant Theories and Evidence About Helpers

This chapter reviews the major models of goal pursuit and shows how the concept of helpers extends and completes these models. Specifically, this chapter will review the theoretical foundations and shortcomings of : field theory (Lewin, 1952), goals-plans-actions model (Dillard 1990a, b, 2004; Dillard, Segrin & Harden, 1989; Schrader & Dillard, 1998), and social support (Burleson & MacGeorge, 2002; Goldsmith, 2004).

Field Theory

Field theory is Lewin's (1952) account of how people achieve goals. This section will explain field theory by discussing two major features of a person's environment: goals and obstructions.

The first major feature of a person's social environment is goals. Lewin regarded a lifespace as the environmental plane on which a person existed (Lewin, 1952, p. 240). In Lewin's view, lifespace implies that both the person and environmental features, such as goals, exist in a person's awareness. Additionally, Lewin argued that a person's lifespace can exist in two different ways. In the first kind of lifespace, common among infants, only a person's present physical environmental features and behavior constitute the lifespace. In the second kind of lifespace, any environmental feature a person attends to, physical or, as Lewin described it, fantasy, constitutes the lifespace. Lewin described the plane of irreality as "the wishes or fears for the future" (1952, p. 245), whereas the plane of reality was "what is expected."

Lewin further argued that two kinds of goals exist in a lifespace: positively va-

lenced goals and negatively valenced goals. Positively valenced goals, Lewin argued, are those goals that have a positive force field (Lewin, 1952, p. 256). As a result of the positive force field, a person is drawn to move toward that goal. In contrast, negatively valenced goals are those goals that have a negative force field and that repel a person and force movement away from the goal (Lewin, 1952, p. 256). Lewin argued that the valence goals acquire are a function of the nature of the goal and what the person needs at any given time (1952, pp. 273-274). Thus, we will call the people who pursue goals pursuers and describe their movement as toward an attractive, positively valenced goal and as away from an unattractive, negatively valenced goal.

Lewin recognized that not all movement toward or away from a goal is successful, which bring us to the second major environmental feature of the lifespace: restraining forces that obstruct movement to or away from a goal region. Lewin argued that there are two types of obstructions: barriers and obstacles. Barriers, Lewin argued, are impassable features of a lifespace that frustrate all attempts to reach a positively valenced goal region or to avoid a negatively valenced goal region because they are impermeable force fields that encircle the person and/or the goal. Although obstacles, like barriers, may frustrate initial attempts at successful movement, obstacles do not encircle the person and/or the goal. As a result, with some persistence, skill, creativity, and/or luck, a person may overcome an obstacle and carry on movement toward or away from a goal. Lewin argued that barriers may acquire a negative valence after repeated attempts to overcome them are frustrated. The negative valence an obstruction acquires functions to move a positively valenced goal region farther away from a person and to bring negatively valenced goals

closer. Both types of movement increase the likelihood of failure to reach a desired future state. And, as failures to overcome the obstruction increase, so too does the obstruction's negative valence until the person abandons all attempts at movement and, in Lewin's language, "leaves the field" (1952, p. 266).

Field theory is a compelling account of people's behavioral attempts to successfully reach attractive goals and avoid repellant ones. However, field theory is incomplete because it fails to recognize that people pursue goals in the context of a social environment — field falsely presumes that the only resources people have available to them are their own. Lewin argued that people, relying only on their own resources, have three possible outcomes when they decide to move toward an attractive goal or away from a repellant goal: success that results from unimpeded motion to or away from a goal; success delayed by some number of futile attempts to overcome an obstacle followed by a successful attempt; and failure resulting from an inability overcome an obstruction. If one considers goal pursuit a solitary activity undertaken in an environment in which no other people are present, field theory's range of goal-pursuit outcomes is accurate. However, people live and pursue their goals in social environments, environments in which they encounter, interact, and form relationships with other people who might be able to help them reach their goals. We shall call these people *helpers*. Indeed, a later section of this paper offers an analysis of several informal and formal social roles helpers may take on that have precisely this function. In short, there are many ways in which pursuers can marshal helpers' resources to aid them in successfully overcoming obstacles to goal pursuit in their lifespaces and, possibly, to convert barriers into obstacles. Therefore, one im-

portant facet of the present project is that it extends and completes field theory by placing field theory into a social context. By doing so, we can use the language of field theory to describe a special kind of functional social relationship (the helper-pursuer relationship) that may occur in any relationship in social domain, where in relation to pursuers' goals these helpers operate (near obstacles and barriers), when helpers operate (at moments of goal frustration or in anticipation of goal frustration), and the outcome of helper's operations (the obstacle or barrier is decreased or eliminated from a pursuer's environment, allowing them to continue their movement toward an attractive goal or away from a repellant goal).

Another feature of field theory that could benefit from deeper analysis is how and why people move toward desirable goals and away from repellant goals. Without elaboration, Lewin characterized people's attempts at goal satisfaction as being a function of a person's needs and the inherent attractiveness or repellence of the goals themselves. As a result of this characterization, it is unclear to what degree and under what circumstances people choose their movement toward or away from goals. Additionally, field theory does not specify how people move toward or away from goals. So, an investigation of helpers that relies solely on field theory's foundations, useful as they are, would remain incomplete because this investigation is concerned with how helpers operate, in addition to where and when helpers operate and the results they help bring about. For a clarification about how helpers might operate, we turn to the goals-plans action model.

Goals-plans-actions Model

Dillard's goals-plans-actions model (GPA; Dillard 1990a, b, 2004; Dillard, Segrin

& Harden, 1989; Schrader & Dillard, 1998) supplements field theory by articulating the process that translates people's responses to a goal's attractiveness into goal-relevant action. Before discussing GPA, it is important to note that Dillard and colleagues defined goals differently than Lewin did. GPA collapses positively valenced goals and negatively valenced goals into one category called goals. Specifically, goals are the "future states of affairs that an individual is committed to achieving or maintaining" (Dillard, 2004). These future states of affairs may be states that a person wants to occur (field theory's positively valenced goals) or states that a person wants to prevent from occurring (field theory's negatively valenced goals). GPA specifies, as does field theory, people behave in ways that they think are going to improve the chances that a desirable future state will occur and in ways that they think are going to prevent an undesirable future state from will occurring. Seeing no meaningful conceptual distinction between field theory's and GPA's definitions of goals, this author will refer to goals using GPA's definition (Dillard, 2004) for the sake of clarity, with the understanding that people may desire to move toward or away from the target future state.

GPA makes an important assumption about goals that is important to this articulation of how GPA supplements field theory and, as a result, this theorizing about helpers. An assumption underlying GPA is that pursuers alone calculate the attractiveness of goals. In GPA, unlike in field theory, the attractiveness of a goal is not a function of anything inherent about a goal itself. The attractiveness of a goal is a function only of a pursuer's appraisal of that goal as being a future state s/he wants to achieve or maintain. This

assumption eliminates the possibility that goal pursuit arises out of some vaguely felt notion that one must move toward a goal for reasons outside of his/her control. In GPA, people are autonomous actors. Additionally, people can alter the goals they pursue and the energy with which they pursue them by recalibrating their commitment to achieving or maintaining a specified future state of affairs or by redefining which future state(s) of affairs they pursue. The degree of autonomy GPA affords to actors means that we must regard people as strategic actors and we must take interest in the goals people pursue, how people pursue them and when they stop pursuing them because, in GPA, goal pursuit is a function of driven, strategic, and autonomous behavior. The rest of this discussion will proceed in the order specified by the GPA model itself: Goals will be discussed first, followed by plans and planning, and concluding with actions.

Dillard argued that two types of goals exist. Primary goals motivate communicative interactions, and bracket, segment, and provide explanations for an interaction (Dillard, 1990a). Secondary goals constrain the means for achieving the primary goal that actors may choose (Schrader & Dillard, 1998). In this way, secondary goals shape the planning and acting stages of the GPA model (Dillard, 1990a; Hample, 2005; Hample & Dallinger, 1990). Research from the GPA perspective indicates five types of secondary goals (Dillard, 2004; Dillard et al., 1989; Schrader & Dillard, 1998): Identity goals, which concern how interactants present themselves and their various epistemological and ideological commitments and standards for behavior (e.g., Goffman, 1959, 1986); conversation-management goals, which may be thought of as facework goals (e.g., Brown & Levinson, 1987); relational-resource goals, which concern the resources and constraints

afforded by interactants' relationship (Dillard et al., 1989); personal-resource goals, which are the resources and constraints vested in and afforded by the interactants themselves; and affect-management goals, which concerns how interactants manage their affective states as well as the resources and constraints afforded by their affective states. Dillard and colleagues argued that not every secondary goal is relevant to every influence interaction (e.g., Dillard, 1990a, 1990b; Schrader & Dillard, 1998). Finally, Dillard, Solomon, and Samp (1996) found support that two meta-goals, dominance and affiliation, exist, and that only one meta-goal frames social interaction at a time.

The second stage of GPA is planning. Berger (2007) distinguished between plans and planning. Plans are "the mental representations of action sequences that people use to achieve their goals" (Berger, 2007, p. 150) that "contain guidelines for the production of verbal and nonverbal behaviors" (Dillard, 2004, p. 192). Plans guide action sequences in two ways: They guide one's own interpretation and production of messages and they guide the interpretation of others' actions. In contrast, planning, Berger argued, is the process by which people choose among plans to select a course of action. Indeed, one of the reasons imagined interactions are functional for communicators is because they allow communicators to mentally rehearse and evaluate the potential effectiveness of different goal-related plans (e.g., Edwards, Honeycutt, & Zagacki, 1988; Honeycutt, 1987, 2008). Dillard (2004) argued that a two-step process occurs in the planning stage, a process similar to that described in action-assembly theory (Greene, 1995, 1997, 2007). First, communicators search their long-term memories to see if an existing plan will achieve their

primary goal. If no such plan is found and if communicators are sufficiently motivated to achieve their primary goal, they will either modify existing plans or create new plans. In this planning stage, communicators formulate proactive plans as well as reactive plans. That is, they plan what they will do and they plan how they might respond if their initial plans are thwarted by obstructions.

The third and final stage of GPA is acting, which occurs when interactants produce one or more messages designed to move them closer to their goal (Dillard, 2004). Dillard (2004) proposed that the relationship between goals, plans, actions, and interactions is such that one's own actions and one's partner's actions may necessitate searching for new plans and/or respecifying goals or specifying new ones. Greene (1995, 1997, 2007) argued that people observe actions' outcomes, integrate the effectiveness data, and use the effectiveness data next time they are in a sufficiently similar situation and need to decide whether to select or modify an existing plan or create a new one.

Given the above discussion, GPA supplements field theory for the benefit of theorizing about helpers in at least three important ways. First, GPA further pinpoints when helpers may be called into help eliminate pursuers' obstacles to goal pursuit. Given the above description of GPA, pursuers may call in a helper when they cannot find an existing plan to use or modify, when they expect and/or have found that an existing or modified plan was unsuccessful, and/or if they have little confidence that they will be able to modify or create a successful plan. Second, GPA allows pursuers to learn from the outcomes of their goals and plans, integrate that knowledge, and use that knowledge to improve their chances enacting a successful plan in the future. In this way, GPA supple-

ments field theory in a way consistent with the well-supported social learning theory (Bandura, 2007) by allowing that pursuers can learn to create, modify, and enact plans from talking with and observing helpers. Third, GPA suggests that some helpers may be necessary for achieving a goal because they regulate pursuers' actual control (Ajzen & Fishbein, 2005).

The goals-plans-actions model supplements field theory's account of goal pursuit by specifying the intrapersonal processes that yield concrete, goal-relevant actions and by allowing for pursuers to learn from their past successes and failures enacting plans to reach those goals. However, like field theory, the goals-plans-action model is incomplete because its view of the processes that yield goal-relevant action is falsely divorced from the social context in which goal pursuit occurs. Additionally, because neither field theory nor GPA describes the interpersonal processes involved in goal-relevant action, both are silent on how helpers' and pursuers' interpersonal communication might affect pursuers' goal pursuit. Fortunately, a third major theory of goal pursuit does just this.

Social Support

Social support is "verbal and nonverbal behavior produced with the intention of providing assistance to others perceived as needing that aid" (Burleson & MacGeorge, 2002, p. 374). Supportive communication occurs in supportive interactions, which are "communicative episodes organized around the effort by a helper to provide assistance through message to a recipient perceived as in need of aid" (Burleson, 2009, p. 23). Decades of research indicates there are differences between the social support people perceive obtaining and the social support helpers believe they offer (e.g., Goldsmith,

2004; Gottlieb & Bergen, 2010). Goldsmith argued that communication studies should focus on enacted support, the support helpers believe they offer, because focusing on perceived and received social support is to focus on cognitive and psychological aspects of social support instead of on the enacted communication aspects of social support. So, following Goldsmith's distinction, this argument will focus on enacted social support, "what individuals say and do to help one another" (Goldsmith, 2004, p. 13).

Many studies of social support in many different fields have identified many different types of social support. Following Goldsmith's (2004) arguments and taxonomy, this paper will focus on the five types of social support most commonly identified by researchers: information support, which is information that helpers think is relevant to ameliorating the problem, including advice and new perspectives on a problem; emotional support, which is support characterized by expressing caring, affection, and emotional-regulation work; tangible support, which is support characterized by offering goods and services that helpers think might be useful; esteem support, which is support designed to bolster self-esteem and feelings of worth; and network support, which is support designed to establish membership in a group and join social networks.

Social support is largely regarded as a theory of interpersonal communication, and not as a theory of goal pursuit, because it concerns messages exchanged between people. To be sure, social support is a theory of interpersonal communication because, as Burleson (2009) summarized the social-support process, pursuers communicate their need to helpers by displaying distress and/or sending messages explicitly requesting help, helpers communicate support to the pursuers, pursuers respond to helpers' messages, and

helpers react to pursuers' responses. A closer examination of social support reveals it is not only a theory of interpersonal communication: It is also a theory of goal pursuit that takes as its starting point the time just after a pursuer fails to reach a goal or when a pursuer anticipates failing to reach a goal. From this new perspective on social support, we can now read Burleson's (2009) description of social support as beginning with pursuers who, having been frustrated in their goal pursuit or who anticipate being frustrated in their goal pursuit, display distress to and/or explicitly seek help from another person in their social environment.

There are several benefits to viewing social support as a theory of goal pursuit. First, it offers a more accurate description of social support because it explicitly situates goal pursuit in a social context and allows pursuers to seek helping pursuing their goals from other people. Second, social support specifies how these third parties affect one's goal pursuit: through communication. Thus we see that theory and evidence about social support can be used to supplement some gaps in field theory and GPA's descriptions of goal pursuit.

However, social support remains incomplete as a theory of goal pursuit, which, because it was promoted as only a theory of interpersonal communication, is perhaps unsurprising. First, the social support literature is largely concerned with the message features, message effects, and relational outcomes of social support and not with how pursuers' failed goal pursuit necessitates those supportive interactions. As a result, extant models of social support are incomplete because they are unable to account for how features of pursuers' goal pursuit (e.g., obstacle size, goal importance) affects the type(s) of

social support pursuers seek, the type(s) and quality of social support helpers provide and when, how pursuers respond to the social support they receive, and for the effects of each on the helpers' and pursuers' relationships. Second, when regarded as a theory of goal support, it becomes clear that social support suffers from a black-box problem that regarding it as only a theory of interpersonal communication obscures. Specifically, helpers' supportive messages are observed to affect pursuers' emotions, cognitions, behaviors and the helper-pursuer relationship, but how these messages do so is unclear. A goal-pursuit perspective on social support allows speculation and investigation of how supportive messages affect pursuers' outcomes, and field theory offers a vocabulary we can begin to use to do so. Specifically, using field theory's language of obstructions to goal pursuit, we may begin to specify that helpers' supportive messages may eliminate the obstacle(s) separating pursuers from their goals, may decrease the size or number of obstacles, may increase the size or number of obstacles (an important theoretical option necessitated by field theory's specification that people may want to avoid negatively valenced goals, something helpers may assist with by intentionally placing obstacles between the negatively valenced goal and the pursuer), and by showing pursuers a new path around an obstacle. Third, field theory also allows for the possibility that that helpers can enact social support by sending supportive messages at the pursuer or at other goal-relevant actors in the pursuer's social environment, something that social support does not contemplate. Finally, research investigating social support as a phenomenon of interpersonal communication has largely treated the social domains in which social support is offered as a context instead of as a variable worthy of examination in its own right. Ar-

gyle, Furnham, and Graham (1981) made a compelling case for treating social situations and social domains as variables instead of as contexts, and for applying to them the same methodical and rigorous investigatory techniques applied to other variables. Regarding social support as a theory of goal pursuit provide the precedent and methods necessary to treat the social domains in which supportive support occurs as variables, thus allowing researchers to quantify when and how social domains influence the social support process.

As the preceding discussion of three majors models of goal pursuit (field theory, GPA, and social support) has made clear, they each have afforded considerable insight into how humans pursue goals and they each are incomplete. What is needed, then, is a theory of interpersonal goal pursuit, grounded in communication, that unifies and extends these three models of goal pursuit and that improves their accuracy and thus their explanatory, organizing, and generative power. The next section proposes a solution.

Chapter 2: Evidence for Helpers

Whereas the prior chapter showed the theoretical location and utility of the helper construct, this chapter reviews the existing empirical evidence that supports the helpers construct. First, six case studies will describe the role helpers play in various domains of social life. Second, two new constructs needed to explain how helpers operate follow the case studies. Finally, evidence from scientific studies is offered.

Helpers, defined in the prior section as those who help pursuers overcome obstacles preventing their successful goal pursuit, are ubiquitous in the social world. An initial scan for helpers in the social world may lead to those prototypical helpers: romantic wingpeople. Wingpeople help pursuers by moving them closer to a desired romantic partner or moving them farther from an undesired suitor. However, as this section will demonstrate, wingpeople are not the only helpers in the social world. In addition to wingpeople, the helping functions of go-betweens (Philipsen, 1992), critics, evangelists, nurses, and attorneys will be discussed in terms of how the people who take on these roles affect their pursuers' frustrated goal pursuit. Examining helpers is critical for unifying and extending the field theory, GPA, and social support because centering our inquires on helpers (and decentering them from pursuers) offers the opportunity to observe the complex processes that occur when pursuers encounter obstacles that frustrate their goal pursuit from the perspective of the people who are called on to fix it.

Matchmakers

We begin our discussion of helpers with romantic matchmakers because the role of wingpeople and romantic matchmakers has long been described in popular culture

through works such as Rostad's *Cyrano de Bergerac*, the film *Top Gun* (1986), and the television show *How I Met Your Mother*. It may be noted by some readers that *wingman*, a term from pop culture that typically refers to non-professional matchmakers, is gendered and thus should not be be used. Consequently, this paper will replace the gendered term with its non-gendered equivalents, *wingperson* and *wingpeople* and proposes that others adopt the non-gendered language, as well.

People who arrange marriages are persistent and pervasive through time and cultures. In 1950s Guyana, "fix-up men" united well educated, steadily employed men with women who sewed well (Smith & Jayawardena, 1958). In 19th and 20th century Albania, *shkus* served as romantic and financial advisors. *Shkus* advised the groom's family about what a fair bride price might be and they advised the bride's family about how large a dowry they might invest in the groom's business (Kera & Pandelejmoni, 2012). In pre-Soviet Kazakhstan, parents of the bride and groom acted as matchmakers for young couples (Werner, 1997). However, parents' matchmaking services were rarely necessary because most marriages were the result of grooms simply abducting women they wanted to marry (Werner, 1997). In 19th-century Russian Jewish communities, *shadchan* were itinerant matchmakers, keeping lists of all the eligible men and women in the towns they visited (Freiden, 2013), whereas in 21st-century Ireland, eligible men and women traveled to the matchmakers (McGrane, 2015).

Although specific details of how matchmakers undertake their work differ by era and culture, some generalities about how matchmakers act as helpers become clear. First,

matchmakers must cultivate and organize an extensive interpersonal network so that they may maximize their clients' chances for a successful match. In this way, matchmakers both ease pursuers' access to the romantic resources in their environment and improve the number and/or diversity of romantic resources in their environment. Second, matchmakers must develop a sense of how much they may burnish the details of a potential spouse because burnishing a suitor too much may create a different obstacle that impedes a singleton's romantic goals. Matchmakers in several cultures seem to have had looser standards, which decreased matchmakers' credibility and increased parties' hesitance to trust their matchmaking recommendations (Frieden, 2013; Kendall, 1996), thus introducing new obstacles to the singleton's pursuit of a romantic match. Third, matchmakers' work to decrease obstacles to romantic matches for multiple helpers at once, which demonstrates how important a helper's network is to their pursuer's successful goal pursuit. In the case of matchmakers, this was to match compatible people for lifelong partnerships, which typically manifested as marriage (e.g., Freiden, 2013; Kendall, 1996; Thernstrom, 2005). As a result, matchmakers tended to consider their clients' potential compatibility and not their clients' potential for romantic love (Thernstrom, 2005), which indicates that helpers may use criteria different than the criteria pursuers might have used, which results in different outcomes. (In the context of matchmaking, compatibility may be regarded as markers of a shared ingroup (e.g., hometown, religious orientation, hobbies), which has been found to promote liking (e.g., Wright, Aron, McLaughlin-Volpe, & Ropp, 1997).)

Given this discussion of matchmakers, we see an initial set of criteria emerging

about what makes a person performing a role in a specific social domain a helper. First, matchmakers exist in a triadic relationship with helpers (a single person looking for a partner and, sometimes, that person's family) and targets (another single person and that person's family). In the case of matchmakers, it is important to note that both pursuers and targets share the same goal, a feature of this social domain that may not occur in other social domains. Second, matchmakers work to help pursuers overcome obstacles to marriage by helping them identify and move toward a suitable romantic partner. Third, matchmakers act as offensive helpers by helping their pilots move toward a desired future state and by keeping rival partners away from a suitable marriage partner once one is identified. Finally, we see matchmakers using communication as the means by which they bring a single pilot's desired future state – marriage – into being and we also see communication as a product of bringing pilots and targets together. In the case of matchmakers, we see that they minimally provide information about romantic prospects (information support), they use communication to bridge pursuers' networks by introducing new people as nodes (network support), and they may, in some cultures, act as a chaperone and manage and monitor initial conversations between prospective matches (tangible support).

Go-betweens

Philipsen (1992) described the "rhetoric of connections" that existed in 1970s Teamsterville, a pseudonym he gave to one of Chicago's ethnic neighborhoods. These connections "with a political leader, a prospective employer, or other kinds of officials

[that] are personal resources that may be morally and effectively marshaled in times of personal need" (Philipsen, 1992, p. 29). Moreover, such connections were necessary to accomplish instrumental and identity goals because, as one Teamsterville resident described it, "the more connections a man has, the more he is a man" (p. 29) and thus the more he can accomplish his goals. Philipsen's analysis suggests that these go-betweens performed three important functions for their neighbors: They limited neighbors' contact with outgroup members and, as a result, strengthened ingroup identities and identification with ingroup values; they vouched for neighbors when neighbors sought beneficial treatment from powerful ingroup members; and they reinforced a rigid and hierarchical social structure that Philipsen attributed to their religious and European roots. Philipsen recounted a conversation with a ward politician about how Teamsterville neighbors could attempt to effect change through collective action instead of appealing to the resources of their interpersonal networks. "I tried phrasing the question in several different ways," Philipsen wrote, "but my interlocutor would or could answer my question only by pointing to the ways in which individuals secured personal favors through the effectiveness of an intermediary in the social or political system. . . . In Teamsterville, [personal] speech and group action are not regarded as effective methods for attaining difficult goals, and sometimes [personal] speech is thought to be counterproductive." (pp. 30-31).

From Philipsen's description of go-betweens in Teamsterville, several important points about go-betweens may be seen. The first concerns pursuers' goals. In most helping situations, pilots define their goals and the obstacles preventing them from reaching

those goals. However, in Teamsterville, it is go-betweens who define their pilots' goals by controlling a resident's access to resources who can authorize the pilot's goals. If go-betweens decline to take up a resident's cause – that is, if go-betweens define the goal differently than pilots or if go-betweens disagree that a pilot's goal is worthy of pursuit – that resident will not achieve the goal he or she set out to achieve because that resident will not gain access to the social resources needed to achieve the goal. Consequently, the example of helpers in Teamsterville suggests that the social domain and the group culture in which the social domain occurs jointly determine what kind of

Figure 1.1 Proposed Relationships Among Culture, Social Domain, and Goal Pursuit

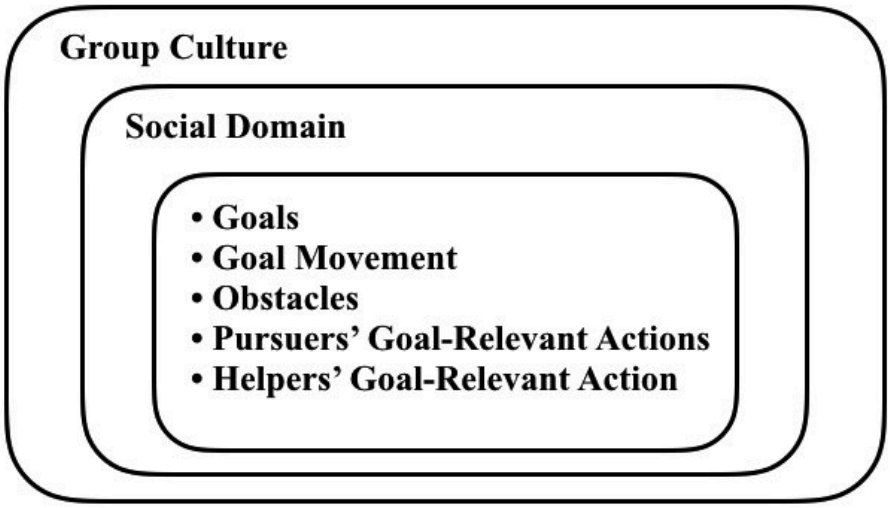

Figure 1.1 Diagram of the theorized relationships among culture, social domain, and possibilities for goal pursuit.

goals are possible to pursue, what kind of goal-relevant movement is possible, and what kind of pursuer and helper actions are possible (see Figure 1.1; see Fitch, 2003, for further reading). Second, go-betweens operate in a rigid social structure. Go-betweens are the only people in the structure who are sanctioned to communicate across power strata.

In this way, go-betweens improve the resident's access to resources and help the powerful targets exercise their power in ways that will reinforce the target's own importance in the system. Third, Philipsen's descriptions make it seem as though the mere presence of a go-between in an interaction is enough to catalyze a resident's request. As a result of these descriptions, go-betweens might seem to do little beyond identifying the relevant power-holding target and informing that power-holding target that his authorization is needed, but actually function as performative presences (cf. Austin, 1979).

The preceding discussion of go-betweens further clarifies the role of helper. First, go-betweens exist in a triadic relationship with their Teamsterville neighbors and power-holding targets. Second, we see that neighbors report facing obstacles in their goal pursuit and turn to go-betweens to help them overcome those obstacles. Third, we see that go-betweens perform a primarily offensive function. Specifically, go-betweens intercede on neighbors' behalves with power holders to help their neighbors move toward a desired future state. Finally, go-betweens use information, tangible, and network support (between themselves and their neighbors and between themselves and the power-holding targets) as the means to achieve their pursuers' offensive goals.

Critics

Critics of all kinds attempt to improve the quality of consumers' decisions in two main ways: by informing consumers about their experience with a play, a restaurant, an album, etc., and by recommending that consumers seek out or avoid that which they review. Lynch (2010) summarized critics' function as consumer advocacy. Carman (2014)

observed that "criticism is an odd profession. It has the ability to drive consumer choice, perhaps even make or break a restaurant (or play or movie or museum exhibit), but professional critics need no official training. They require no certification, no license, no film or art or culinary degree. They just need to pass the inspection of their employers."

It may be argued that critics' opinions may not be influential (e.g., consumers may not know or care about critics' opinions; critics' opinions may be only one factor among many that consumers use to make decisions about how to spend their time and money). However, examples abound of creators responding poorly to critics' opinions (on the grounds that critics' opinions are uninformed, incorrect, or both) because creators *believe* that critics influence /their revenue and their reputations (Brion, 2010). Consider an example from the Dallas, Texas, food scene. Chef-owner of Knife, John Tesar, banned *The Dallas Morning News*' food critic Leslie Brenner from his restaurants after Tesar did not like Brenner's review of his restaurant (Filloon, 2014). Before becoming *The Dallas Morning News*' food critic, Brenner wrote six books, won two James Beard Awards for her food writing, and worked as a food critic at *Los Angeles Times* and *Travel and Leisure.* Brenner's allegedly objectionable review appeared in the July 16, 2014, edition of *The Dallas Morning News,* in which she wrote: "The steak was carved off the bone in the kitchen into glistening, gorgeously rosy slices, each crusted with a mantle of char. . . . [However], it is a shame that when such care is taken with sourcing and aging [the beef], the kitchen too often drops the ball." Elsewhere in the review, Brenner (2014) wrote: "I couldn't pass up the $14 bacon tasting. . . . Five strips, one (Breton's, my favorite bacon),

severely overfried; altogether it was as impressive as those new duds the emperor bought." On Twitter, Tesar wrote to his nearly 4,000 followers, "@lesbren f--- you ! Your reviews are misleading poorly written, self serving and you have destroyed the star system and you really suck" (Tesar, 2014). In an interview later that day (Filloon, 2014), Tesar called into question Brenner's credentials as a food critic, arguing that someone with what Tesar characterized as insufficient credentials should not be able to exert such influence on his and others' livelihood by reaching so many people with their opinions. Indeed, *The Dallas Morning News* boasted of its 253,000 daily circulation readership and influence on its Web site: "Reach the affluent, the educated, and the engaged with The DMN" (2014). Tesar rallied other Dallas-area chefs and restaurateurs to his anti-Brenner cause. As a result, just four months after Brenner reviewed Knife, the Tesar-led group of restaurateurs effectively banned all of *The Dallas Morning News*' critics and photographers from their ten restaurants by refusing to accept *The Dallas Morning News*' money[1].

The Dallas food scene is not singular in the contempt chefs have for local critics. Chefs and restaurateurs in Miami and Los Angeles have also banned critics or outed anonymous critics (Brion, 2010; Forbes, 2011; Lynch, 2011) in retaliation for perceived slights or inaccuracies. Additionally, chefs and restaurateurs in Washington, D. C., have

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[1] *The Dallas Morning News* had an editorial policy prohibiting even the appearance of impropriety, so the newspaper paid for their critics' dining and entertaining expenses and refused to let establishments provide food or entertainment for free. In refusing to accept money from *The Dallas Morning News*, these restaurateurs used the newspaper's own editorial policy to keep critics out of their restaurants because critics dining in a professional capacity were not allowed to accept free food or pay with their own personal money.

compiled a dossier on food critics' and bloggers' preferences, education, and idiosyncratic preferences in an attempt to maximize their chances of obtaining a favorable review by catering to each critic's idiosyncratic preferences (Sidman, 2014). Taken together, these examples highlight several aspects of how critics function as helpers. First, the main function of critics is to improve the number and/or diversity of consumables in people's environments through offensive (steering consumers toward good-quality consumables) and defensive (away from poor-quality consumables) communication. Critics must be at least somewhat successful in this regard because the aforementioned examples highlight what consumables' aggrieved producers do when they perceive a critic has slighted them in a review. Additionally, these examples illustrate the importance targets (that is, the producers) place on helpers' competence and motives. Chefs and restaurateurs repeatedly called into question the expertise and motivations underlying critics' reviews on the grounds that incompetent critics (Filloon, 2014) or critics of dubious intent (Brion, 2010) should not be allowed to influence consumers' behavior. Although Caplow's (1968) analysis of coalitions in triads did not explicitly mention the competence or motivations of the helpers who complete the producer-consumer triad, one may infer that triads will become unstable and conflict-ridden if helpers prioritize and maximizes their gains instead of prioritizing and maximizing the pursuer's good.

We see, too, a further clarification of the helper role through this examination of critics. First, critics exist in a triadic relationship with their audience of consumers and with the producers of a particular piece of entertainment or dining. Some may argue that

critics should not be counted as helpers because they largely do not have direct interpersonal relationships or communication with individual members of their audience. However, this argument fails to consider that helpers do not have to have direct interpersonal relationships or communication with each member of their audience in order to help audience members reach desirable future states and avoid undesirable future states, nor must helpers' services be explicitly called for by pursuers. Additionally, critics explicitly intend to help remove obstacles to their audience's consumption of good things and to help minimize their audience's consumption of bad things. Therefore, as illustrated in Figure 1.1, the amount of direct communication helpers and pursuers have and the necessity of pursuers specifically requesting helpers' assistance to reach their goals depends on the social domain in which helpers and pursuers pursue goals. Second, critics' audiences typically face obstacles to consuming good things and avoiding the consumption of bad things because audiences may lack the skill or motivation to distinguish good from bad. Critics supply the skill and motivation to make useful distinctions, thus helping their audiences overcome the obstacle to consuming good things and avoiding the consumption of bad things. Third, we see critics perform both offensive and defensive functions: As noted earlier, they steer their audiences toward the good and away from the bad. Finally, we see that critics primarily use information social support as the steering mechanism, albeit in a mediated public setting, unlike matchmakers and go-betweens.

Evangelists

Evangelism has a long and primarily religious history. Cruchley-Jones (2016) reported that *evangelism* comes from the Greek term *evangelion*, which originally meant

gospel. *Evangelion* was

> The announcement of a great military victory, or the rule of a new king or emperor. It's the [public relations] of empire, the announcement of the good news of victory. . . . The messages issued by the emperor were called *evangelion*, regardless of whether or not their content was particularly cheerful and pleasant. The idea was that what comes from the emperor is a saving message, that it is not just a piece of news, but a change of the world for the better (Cruchley-Jones, 2016, p. 33).

Cruchley-Jones (2016) further argued that early Christians' use of *evangelion* was political as much as it was spiritual. Christians who used *evangelion* "proclaimed that it is not the emperors who can save the world but God . . . the[ir] use of *evangelion* about Jesus was the proclamation of Jesus not as *neo*-Caesar but *anti*-Caesar and certainly *contra*-Caesar" (Cruchley-Jones, 2016, p. 34). In the ensuing millennia, the political aspect has largely been stripped from the word: Mark Teasdale, a professor at Northwest University's Garrett Seminary, defined evangelism in an interview as "verbally sharing [one's Christian] faith" (Butler, 2016, p. 72).

Evangelism was not undertaken only by members of Christian faiths. For example, pictographs and ideographs indicate that evangelists of the Katsina religion were one of many groups of evangelists who sought to convert native inhabits of the Chaco Canyon, N. M., region, and did so centuries before Catholic missionaries moved into the area (Brooks, 2013).

The term *evangelist* has been broadened in recent times to refer to anyone who

attempts to share a particular belief system with non-believers. For example, one popular kind of evangelist is a technology evangelist, someone who attempts to get people to adopt the software, hardware, or technological devices (e.g., laptops, wearable technology, smart phone) s/he promotes. And technology companies such as Google and Adobe hire specifically for a position called evangelist. An Adobe Photoshop evangelist explained technology evangelism as

> Help[ing] keep our customers informed with regards to our applications and technologies by demonstrating the actual products, as well as by showing examples of extraordinary and imaginative images created with the applications. Evangelism also includes serving as the liaison between the engineering team and the individual user of the product — making sure that features of Photoshop and Lightroom are understood by people who use them. . . . An evangelist should be able to recognize what features and components of an application are most beneficial to a specific group of users (Kost & Schranz, 2010)

Although Silicon Valley has been only relatively recently mythologized cultural and economic Xanadu, technology evangelism is not a new profession. In 1982, a technology evangelist who "make[s his] livelihood by combining the disciplines of microbiology and computer technology" (Krichevsky, 1982, p. 313) addressed microbiologists in the 1982 Annual Review of Microbiology. In explaining the possibilities of using computers for microbiologists' data storage and analysis, the evangelist wrote:

> Each type of computer system has its own cadre of evangelical advocates. The most common evangelists are the users of any type of system who are convinced

> they have found the true way. Use their method, program, algorithm, computer, etc., and it will be easy! . . . There is another class of evangelists comprised of new amateur users of computers. The new graduate from a BASIC programming course, or the owner of a personal computer, or the parent of a budding computer science genius (Krichevsky, 1982, p. 318).

Moving further away from the original, religious sense of the word, are people in various disciplines who have argued that their colleagues fulfill the general functions of an evangelist by sharing beliefs with non-believers in an attempt to convert them. Wareham (2002), for example, argued that the archivists who established archives in Pacific island countries were evangelists.

> Like the London Missionary Society or the Marist Brothers, archivists arrived in the Pacific with the aim to serve a greater purpose. They brought with them a strong belief in a system that could resolve problems and provide great benefits to Pacific island communities. For this introduced system to be successful, locals who maintained alternative existing systems would need to be converted to the new order. Particularly in resource-poor, developing island communities with continued strong links to their cultural heritage, there seem to be an array of issues obstruct archival development, despite recurrent attempts at archival evangelism (Wareham, 2002, p. 204).

The obstacles to spreading the archival faith were significant and numerous: cultural predispositions that favored oral histories to written histories; little government interest or financial investment in storing artifacts or hiring sufficient personnel to collect, sort, cat-

egorize, and preserve them; and a hot, humid, and earthquake- and volcano-prone climate that makes the long-term stability and security of documents and other artifacts difficult (Wareham, 2002).

Educators claim evangelists, too, and their existence goes back further still. For example, the Chautauqua Library and Scientific Circle was borne in 1878 from John Heyl Vincent's feelings of inferiority because acceded to his parents' wishes and did not pursue a college degree (Kniker, 1979). However, Vincent remained so convinced of the importance of a collegiate education that he created the Circle, an adult-education program "to give 'out-of-school' people a chance to obtain a 'college outlook'" (Kniker, 1979, p. 75). Vincent intended the Circle to be a an adult-education program rooted in the Protestant faith, so many of the books participants read in the first two decades were written by Christian ministers. In the eighty years that followed, the Circle's curriculum was expanded to include such topics as astronomy, psychology, chemistry, art, and civil rights. Although most Circle members lived in New York, Pennsylvania, and Ohio, the Circle had members in more than thirty states, and their response was enthusiastic:

> Most correspondence the Circle received was positive, and frequently it was of a testimonial nature. For example, four Montana women, living on isolated ranches, wrote how valuable it was to study the Circle curriculum, despite their long horseback rides [to Circle meetings] each week. The minutes of the local circle programs throb with the feeling that the member were engaged in a significant cause, for them something more meaningful than a quilting circle or bridge club (Knicker, 1979, p. 83).

It seems, then, that all evangelists share the same goals and motivations despite promoting different beliefs. First, evangelists' actions are motivated by belief and by their certainty that non-believing others would benefit from sharing that belief. Religious evangelists promote a particular set of religious beliefs and seek to have others share those beliefs. Technological evangelists believe in the value of the platform they promote and believe that others' lives would be improved by believing in and using those platforms, as well. Archivists who travel to other countries to implement archival systems believe in the value of documenting cultures in systematic ways for posterity and seek to have others adhere to those beliefs. Finally, educators believe in the importance of education and want others to share those beliefs. Second, all evangelists actively and exclusively spread their beliefs to nonbelievers. Although it is important to strengthen believers' faith, they already experience the benefits of belief. Nonbelievers are in danger – in the above cases, in danger of eternal spiritual damnation, in danger of diminished efficiency and connectivity, in danger of losing cultural knowledge, and in danger of living outside the warm glow of connection with "the resources of the world" (Kniker, 1979, p. 81) – and thus are in greatest need of saving and in greatest need of evangelists' considerable efforts. Third, although evangelists must be true believers in order spread their faith, accepting payment for spreading their beliefs does not seem diminish their effectiveness or credibility. In fact, it appears that many evangelists prioritize the opportunity to engage with and promote their beliefs among the non-believers above the opportunity to be paid for doing so. Kost, for example, wrote that she pursued a job with Adobe in the early

1990s as a way to pursue her love of photography and as a way to gain access to a prohibitively expensive suite of photo-editing software (Kost & Schranz, 2010).

As a result of the previous discussion, we see that evangelists may be understood to function as helpers. At this point, some readers may object to evangelists being considered helpers because, they might argue, beliefs do not have goals and so cannot have obstacles because they are not human. To this point, we have considered pursuers to be humans because, thus far, we have seen helping cases where only humans have goals, require targets' cooperation to reach that goal, and experience obstacles in their goal pursuit. However, a line of analysis suggests otherwise. Irions and Nichols (2016) argued that beliefs such as conspiracy theories have goals, as well. Beliefs are incarnated in people and organizations, which means that beliefs are animated by the faithful. Thus, beliefs, like people, have a survival instinct — their goal is to be shared because gaining adherents ensures their survival. If beliefs are not shared, they will die the slow death of obsolescence. However, beliefs cannot share themselves; rather, like parasites, they require help to reproduce. For beliefs, this help comes in the form of communication when the faithful who already have the belief try to implant it in the nullfidian. Finally, beliefs experience obstacles in their goal pursuit. In the evangelist examples just discussed, obstacles took the form of physical obstacles (Wareham, 2002), network obstacles (Granovetter, 1973), and motivational obstacles (Chen & Chaiken, 1999). In any case, obstacles frustrate the belief's reproduction goals, to obtain nonbelievers' adherence.

Given Irions and Nichols' (2017) analysis that beliefs have goals, require assistance to reach those goals, and experience obstacles that frustrate their goal pursuit, we

should be comfortable holding the thought that, in these respects, we may consider evangelists as helpers and use them to offer further information about how we might usefully define helper. First, evangelists exist in triadic relationships with beliefs and nonbelievers. Second, as discussed above, beliefs experience obstacles to being more widely adhered to. Third, evangelists perform offensive functions when they actively share their beliefs with nonbelievers. Evangelists may also perform defensive functions by attempting to overcome nonbelievers' resistance to adhering to the belief by discussing unfavorable aspects of competing beliefs. Finally, evangelists accomplish their goals using informational social support, although some esteem and network support may also be required. Although evangelists engage in little direct communication with their beliefs (communications with various forms of divinity are excepted from this claim), evangelists communicate extensively with the nonbelievering targets in order to gain their adherence.

Nurses

Nurses engage in helping relationships with many targets on behalf of pursuers in order to secure the best possible health outcomes for their patients. Nurses coordinate patient care with physicians, other nurses, patients' families, other caregivers, interpreters (Bridges, Nicholson, Maben, Pope, Flatley, Wilkinson, Meyer, & Tziggili, 2013; Morse & Piland, 1981), and, in cases of sexual assault, with victim advocates, police, and prosecutors (Maier, 2013). It may seem from the number of relationships nurses manage that they cannot be helpers because there are more relationships in this context than in instances of simple helping interactions that consist of a helper, a pursuer, and a target.

However, because helpers are defined by function and not by number of relationships, we may think of nurses as helpers in unusually complex relational contexts.

Nurses are specifically and extensively trained for their jobs, and so are unlike helpers in more temporary and informal roles, such as wingpeople. Negotiating so many relationships in service of a goal with such high stakes can exact a great toll. Aiken, Slone, and colleagues have investigated the effects of nurses' exhaustion, burnout, and dissatisfaction on their wellbeing and the quality of patient care they provide (Aiken, Clarke, Sloane, Sochalsky, & Silber, 2002; Kutney-Lee, McHugh, Sloane, Cimiotti, Flynn, Neff, & Aiken, 2009; Vahey, Aiken, Sloane, Clarke, & Vargas, 2010). These researchers found that the more emotional exhaustion nurses reported, the less likely patients reported being satisfied with the nursing care they received (Vahey et al., 2010). Additionally, the team found that as the number of patients under a nurse's care increased, so too did the amount of burnout and job dissatisfaction nurses reported and their patients' mortality rates. Additionally, the team found that nurses' perception of patient-care standards and, crucially, their perceptions of low-quality nurse-physician and nurse-nurse relationships were strong predictors of whether patients reported being satisfied with the quality of their care, their willingness to recommend the hospital to other people, and their pain was well controlled during their stay (Kutney-Lee et al., 2009). The result of this research program points to a cycle of increasing nurse stress that leads to poorer patient outcomes, which in turn elevates levels of nurse stress because their patients require more and more intensive care. Additionally, the case of nurses reminds us that helpers in social domains that are complex, demanding, and have little margin for error may experi-

ence fatigue, stress, and burnout and lower effectiveness if they experience burn out.

Nurses, although an unusually formalized and complex helper role, still offer illumination of what a helper is and what a helper does. First, nurses exist in triadic relationships with patients, who are the pursuers, and with many targets and many categories of targets (e.g., doctors, nurses, families, victim advocates). That nurses are the fulcrum in helping relationships with many targets should speak to the complexity of nurses' jobs as helpers and the skill required to effectively negotiate so many relationships and assist in the pursuit of so many goals. Second, medical patients, by definition, face obstacles to health. Such obstacles include: making sure their medical records from other providers are incorporated into the records of current health-care provider; obtaining sufficient information about when and how to take a regimen of medicines; phrasing health-related questions in a way that busy physicians can parse quickly and making sense of physicians' responses, which may be jargon-laden; and figuring out which medical developments to summarize to nurses on incoming shifts and how best to present that information. These examples are obstacles to attaining the goal of improved health because they are problems that patients experience that must be solved in order to receive relevant, timely, and appropriate health care. Additionally, they require skills, relationships, and mobility that patients seeking medical care may not have. Third, nurses engage in offensive and defensive functions in their attempts to help their patients gain or maintain health. Nurses' offensive functions may be generally summarized as providing their patients the information, relationships, and inspiration to engage in health-promoting behaviors; their defensive functions may be summarized as providing their patients the infor-

mation, relationships, and inspiration to avoid health-damaging behaviors. Finally, nurses coordinate and make sense of all this information and all these relationships with communication (e.g., Hadlow & Pitts, 1991; Kruijver, Kerkstra, Bensing, & van de Wiel, 2001; Lally, 1999; Manias, Aitken, & Dunning, 2005).

Attorneys

Chen (2004) argued that attorneys are advocates who "adopt a stance, advance a cause, and attempt to produce a result on behalf of an interest of a person, group, or cause" (p. 9). Indeed, it is attorneys' responsibility to inform their clients of laws, options, implications of options, and to persuade clients about which option would best serve their interests. Peterson-Badali, Care, and Broeking (2007) found that the leading factor in young offenders' liking of their attorneys was their attorneys' competence. Professional competence may be thought of as a major factor underlying attorneys' ability to effectively help their clients.

Attorneys practicing in the United States have their actions expressly delimited by national and regional ethics codes, the violation of which could result in sanctions. The American Bar Association (2014) provides a model of 35 rules of professional conduct, which Munneke characterized as "aimed at protecting a class of persons (clients) from specific evils" (1998, p. 82). For example, Rule 1.2 addresses how an attorney and client may share authority. Specifically, "a lawyer shall abide by a client's decisions concerning the objectives of representation and . . . may take such action on behalf of the client as is impliedly authorized to carry out the representation" (American Bar Association, 2014).

Additionally, Rule 2.1 describes what attorneys may do in their capacity as advisor: "In rendering advice, a lawyer may refer not only to law but to other considerations such as moral, economic, social, and political factors that may be relevant to the client's situation" (American Bar Association, 2014). Finally, Rule 4.4 explains how attorneys should act with persons who are not their clients: "A lawyer shall not use means that have no substantial purpose other than to embarrass, delay, or burden a third person" (American Bar Association, 2014).

Taken together, these examples of professional and ethical conduct for attorneys further help us define helpers. First, clients value attorneys because attorneys improve clients' access to legal resources in their environments and because attorneys can improve the number and/or diversity of legal resources clients have access to. Second, the rules of fair play in attorneys' interactions with clients and third parties are clearly outlined. These rules limit the manner and extent to which attorneys may intercede and do impression management on their clients' behalf. Third, in most cases, most clients in a legal episode have attorneys who advocate claims on their behalves. Legal episodes are highly rule-governed and structured to be adversarial contests of competing claims backed by evidence and warranted by ordinance and legal precedent. This social domain is a stark contrast to matchmaking interactions, which, by dint of the same person representing both parties' interests, tend to be more collaborative and compromising. Additionally, because the matchmakers' codes of ethics may be loose or non-existent, helping in the courtship domain is also far less formal than in the legal domain.

The above analysis suggests that attorneys, in their highly formalized and rule-bound social domain, are still helpers. First, attorneys exist in triadic relationships with their clients and with those who will decide their clients' cases – judges, juries, and in the case of settlements, the opposing party and the opposing party's counsel. Second, attorneys' clients experience several obstacles to their legal goals. Typical obstacles are insufficient knowledge of relevant case law and legal procedures (e.g., which legal documents to file and when; rules of evidence). Third, attorneys perform both offensive and defensive functions by arguing for their clients' interests and against the opposing party's interest. Finally, communication is the substance of attorneys' written and oral arguments to those who decide the legal outcome and to the opposing party's counsel.

Defining and Describing Helpers

The above description of six types of helpers in six social domains has helped us strengthen a definition of helper and distill an explanation of what helpers do. Definitions of constructs are important because they specify elements necessary for an instantiation of the. Note that definitions are different than descriptions. Descriptions specify elements that usually occur with a construct but whose mere presence does not necessitate an instantiation of that construct. In the following two sections, I offer a definition of wingpeople, followed by a description of wingpeople. Both are necessary in order to understand the contours of this construct.

Defining Helpers

I begin by offering a definition of wingpeople by including only those elements

that are necessary for a social actor to considered a helper and I conclude with a definition of wingpeople based on those elements. Given the above examples of helpers and earlier discussions of the three major models of goal pursuit, four elements that define wingpeople become clear: the pursuer's goals, a relational component, the helper's functions, and communication.

The first element concerns the pursuer's goals. To review: Lewin (1952) argued that people's goal pursuit can be hindered by two kinds of obstructions: obstacles and barriers. Obstacles, Lewin argued, are those surmountable things that frustrate or impede movement toward a goal but that may be overcome. In contrast, barriers are those things that prevent movement toward a goal but that may not be overcome. Lewin argued that people faced with obstacles and barriers experience frustration from the tension that exists between their desires to move toward or away from a goal and their inability to do so. Lewin further argued that this tension is resolved when people either overcome the obstacle or leave the field – Lewin's term for abandoning goal pursuit. I propose that helpers, through means discussed later, intervene before pursuers leave the field by helping pursuers overcome obstacles so they may continue their goal pursuit. Thus, the first critical piece of our definition of helpers defines helpers in relation to pursuers' goals: Helpers facilitate pursuers' goal-relevant movement by acting upon obstacles separating pursuers from their goals..

The second element in the definition of helpers concerns the three core parties in a helping situation. Helpers exist in a triadic relationship with a pursuer and a goal. Following Dillard's definition of goal as future state someone is motivated to obtain or maintain,

goals may directly require other people (as in the case of marriage goals in the courtship domain) or may indirectly require other people (as in the case of the healthcare domain, in which another person is required to complete the goal of inserting a saline drip). One may be tempted to suggest that goals may not require other people at all but, because people's goals exist in and are responses to a social environment, some degree of human involvement with a goal is always present (as in the case of improving an exam grade: completing an exam should be a solitary endeavor, yet it was devised and administered by another person). Helpers and pursuers exist in a relationship of alliance: Both work toward the pursuers' goals. Goals' relationships with both helpers and pursuers are presumed to be benignly combative: If the goal were inclined to act in line with a' future state pursuers desired to maintain or attain, pursuers would not experience an obstacle on the path toward that future state and thus would not require a helper. At the beginning of this triadic relationship, helpers and goals are known to pursuers, and pursuers and goals are known to helpers. However, pursuers and helpers may or may not be known to the goals.

The third element concerns helpers' functions. Helpers' functions, at their broadest level, parallel Lewin's (1946) discussion of goals. Offensive helpers help people overcome obstacles so they can move toward a desired future state whereas defensive helpers help people move away from an undesirable future state. It should be noted that helpers may engage in offensive and defensive functions simultaneously, as in the case of romantic wingpeople who hold the offensive goal of helping their pursuers move toward a desired romantic partner while simultaneously holding the defensive goal of keeping poten-

tial romantic rivals away from their pursuer's target. In sum, wingpeople must hold at least one of these two goals, and may, in special cases, hold both, either alternately or simultaneously. Crucially, while acting as helpers, people temporarily subordinate pursuing their own goals to pursuing those of the pursuer. People who pursue neither offensive nor defensive goals of helping pursuers overcome an obstacle are not considered helpers.

The fourth element concerns communication. Helping, as discussed above, is instantiated by communication (Burleson, 2009; Goldsmith, 2004). Helpers primarily use communication to help pursuers overcome obstacles separating them from a desired future state. Helpers may remove obstacles using such social support messages as: introducing pursuers to goals; advising pursuers; boosting pursuers' self-esteem; and by joining, maintaining, and/or managing conversations between pursuers and goals. Helpers may also use communication to favorably dispose a goal to their pursuer's desired future state. There are some instances where wingpeople help pilots overcome obstacles through non-communicative means, but those few instances are in service of communication episodes. For example, helpers may work to put the right people in the right place at the right time by manipulating an environment in such a way that the goals is forced to acknowledge the pursuer as the pursuer moves around the environment. This scenario is an example of tangible social support, a type of enacted support recognized as being communication (Goldsmith, 2004). As a result of this discussion, we may say that helping is a communicative act because communication is the means and frequent result of it.

Given the above elements, I offer the following definition of helpers: Helpers are people who facilitate others pursuing their goals by helping them to overcome obstacles

separating them from a desired future state using communication and/or in service of communication.

Describing Helpers

It is also productive to describe helpers by highlighting those elements that commonly occur in helping situations but that, by themselves, are not necessary to establish that a social actor is a helper or that a series of actions and interactions should be considered an instance of helping. Three such elements are helpers' motivations, invitations, and the degree to which the helper role is formalized and institutionalized.

The first descriptive element concerns helpers' motivations, a more elaborated discussion of which occurs later. Irions (2013) found that most offensive and defensive helpers reported their motivations for helping were relational. Their helping either arose from concerns for the pursuer's wellbeing and safety or from concerns about balancing debts in a relationship. However, a small minority of helpers reported acting from self-centered motives: These helpers pursued their own interests and, while doing so, happened to help the pursuer surmount an obstacle. Thus, acting from relational concerns is a common feature of being a helper but is not a necessary feature that defines a helper.

A second descriptive element concerns helpers' invitations – that is, how helpers are made aware that a pursuer needs their help to overcome an obstacle to a desired future state. Helpers should receive a recruitment invitation from a pursuer to intervene on the pursuer's behalf. Failure to receive such an invitation risks damaging the relationship with their pursuer and risks less pursuer compliance with the advice. Irions (2017) conducted a study about the effects of receiving wanted and unwanted advice, a type of in-

formational social support. She found that, compared to people who received wanted advice, people who received unwanted advice (that is, people who received advice from someone despite not extending that person a recruitment invitation) reported being angrier at the advisor, perceiving the advice message as being more threatening, engaging in more counterarguing against the advice, and trying harder to avoid situations in which they could enact the advice. In contrast, people who wanted advice reported liking the message, liking the advocated behavior, and intending to perform the advocated behavior. These findings indicate that people who receive unwanted advice experience more psychological reactance than those who received wanted advice (e.g., Brehm, 1966; Dillard & Shen, 2005). By implication, these findings indicate that people who receive unwanted advice see the advisor as approaching the relationship through a dominance frame, a frame that associated with lower-quality relationships (Dillard, Solomon, & Samp, 1996; Solomon, Dillard, & Anderson, 2002). Additionally, if wingpeople intervene without a recruitment invitation from a pilot, they probably increase the pilot's chances at failing to reach a goal because the pilot, acting from psychological reactance, is more likely to not take the wingperson's advice, regardless of how good the advice was.

Finally: Some people may object to viewing professionals such as nurses and attorneys as helpers because their helping roles have been formalized, institutionalized, and professionalized. As we will see below, this concern is mitigated by a deeper analysis of the helper role using Goffman's (1959) ideas about role theory. As social-support researchers Gottlieb and Bergen (2010) noted, the helper role is usually a temporary role. People typically don and doff their helper roles in response to certain features of their in-

terpersonal and social contexts. Recast in terms of Goffman's (1959) theorizing on roles, people adopt the helper role, which arises in response to the affordances and constraints of particular scenes, actors, props, and their own skill in performing the role. Additionally, different scenes — different social domains — require the performance of different kinds of social support to help people overcome obstacles to goal pursuit. When a feature of the scene, actor, or prop changes, helpers' roles may conclude because people adopt and perform the helping role in response to the exigencies of their social environments. Because those exigencies may or may not arise again, people may or may not don and perform a similar helper role in the future. An evolutionary perspective (e.g., Tooby & Cosmides, 2005) on the helping role allows us to consider the idea that people have probably encountered reasonably similar obstacles to goal pursuits in a given social domain. Thus, it would be an efficient, adaptive social solution to, as action-assembly theory (Greene, 1995, 1997, 2007) would also suggest, create a recurring role within that social domain to help people overcome that common and recurring obstacle to goal pursuit. For example, in the academic social domain, a common, recurring obstacle students face to earning good grades is not encountering material in ways that they can easily take in. So, a role that was created in the academic domain to respond to that common, recurring obstacle was a tutor. People who don the role of tutor follow scripts of varying specificity as they provide information support (by explaining the material in a new way) and esteem support (offering motivation and validating the student's capacity to learn) as they engage in a performance designed to help students overcome the obstacle to earning good grades. There are other domains, such as medical and legal domains, where performing a helping

role now requires people to gain highly specialized skill sets that few people outside of that training program have because the stakes of overcoming obstacles in those domains are considered to be quite high and long-lasting. So, just because a scan of the social world returns helper roles in a few domains that are formalized, institutionalized, and/or professionalized does not mean those roles are outside the scope of this conceptualization. Rather, it simply means that those roles are helping roles that are uncommon because they respond to an uncommon set of features of the social domain, pursuer, and obstacle. At this point, some might still object because they point to professions such as nurses and attorneys and suggest that because helpers are a temporary role, people who have a professionalized helping role may not be helpers because professions are not typically thought of as being temporary. Again, this objection is accounted for by our conceptualization of helpers. Even professional helpers have areas of their lives in which other social identities are activated (Abrams & Hogg, 2010), so even professional helpers' roles, even though they spend many hours of their lives performing the role, are temporary. For an example, consider nurses. Just because nurses have extensively trained for a set of specialized medical skills and use those skills regularly as part of their profession does not mean that they move through all the social domains of their lives as nurses. Indeed, in other social domains, the identity primarily activated will shift because identity activation responds to features of people's social environments (Abrams & Hogg, 2010); so, too must the performances that flowing from an activated identity. In other realms of their social lives, nurses' primary activated identity may be parent, elected member of a homeowners' association, or adult religious-education leader. Indeed, in other social

realms when these other identities are the primary activated identity, nurses may not be thought of first or primarily for their specialized medical skill set and indeed may require helpers of their own to accomplish goals such as helping a child complete a homework assignment or securing funding to refurbish neighborhood playground equipment.

Now that we have defined and described some common features of the helping role, we will examine how helpers perform their roles.

Resources and Substitutability

Identifying and describing helpers has allowed us a unified model of social goal pursuit. We are now able to use this new unified model of social goal pursuit to draw some new implications about how helpers affect their pilots' goal pursuit. Two such ideas will be discussed in this section. The first idea concerns how helpers affect their pilots' goal-pursuit resources. The second idea concerns helpers' substitutability.

Helpers Improve Pursuers' Resources

The first idea about helpers' effects on pursuers' goal pursuit concerns how helpers affect pursuers' resources. Specifically, helpers improve the resources pursuers can draw upon to overcome obstacles to goal pursuit in three main ways: by increasing the number of resources available, by diversifying the resources available, and by helping pursuers make better use of the resources already available to them. One way helpers may increase the number of and/or to diversify the resources available to pursuers is by adding more of some resource the pilot already had available but in insufficient quantities to overcome the obstacle to goal pursuit. We might consider a baking example to illustrate this idea. If a pursuer is attempting to bake a loaf of bread and has only 600g of the

750 g of bread flour required, a helper would increase the pursuer's resources by providing the additional 150 g of bread flour required for the recipe. A second way helpers can affect pursuers' resources is by diversifying the resources pursuers have access to — by making new resources available to pursuers that they did not or would not otherwise have access to. To continue the baking example: If a pursuer is attempting to bake a loaf of bread and does not have any of the yeast required for the loaf, a helper would increase the diversity of the pursuer's resources by providing the yeast required for the recipe. Finally, helpers can affect pursuers' resources by showing pursuers how to make better use of their existing resources. In our baking example, the pursuer has now obtained all the necessary ingredients but finds the kneading process difficult. So, the kneading process is an obstacle to pursuing the pursuer's goal of baking a loaf of bread. A helper might show the pursuer how to make better use of her existing resources by showing her how to use a stand mixer to knead her dough or by demonstrating a less taxing kneading technique. It is important to note that the way the helper affected the pursuer's resources was through various forms of social support: The helper provided tangible support when giving the pursuer flour and yeast and information support when explaining how to better knead the dough. This discussion allows to see that our conceptualization of helpers enables us to specify how social support helps recipients, an idea that was previously unavailable to theorists and researchers who considered social support to be solely an act of interpersonal communication instead of interpersonal communication in service of goal pursuit. Furthermore, this discussion suggests that the better helpers can match the social support they provide to the type of resource deficiency pursuers experience, the more likely it is

that pursuers will overcome the obstacle that separates them from their desired future state. As a result, the following propositions, which provide the basis for later hypotheses, are offered:

Proposition 1

> The more helpers can increase the number of resources available to pursuers, the better their pursuers' chances of overcoming the obstacle separating them from a desired future state.

Proposition 2

> The more helpers can increase the diversity of sources resources available to pursuers, the better their pursuers' chances of overcoming the obstacle separating them from a desired future state.

Proposition 3

> The more helpers can improve the pursuers' ability to make better use of their existing resources, the better their pursuers' chances of overcoming the obstacle separating them from a desired future state.

Helpers' Substitutability

On their own, increased resources, diversified resources, and an ability to make better use of existing resources may not sufficient for pursuers and their helpers to overcome obstacles to a desired future state. Helpers likely require additional qualities in order to help their pursuers overcome obstacles to desired future states: knowledge of the pursuer, goal, and the social domain in which the pursuer is attempting to reach the goal;

the skill to help pursuers navigate their interactions with the goal and the social domain in which such interactions occur; and the ability to discern which resources and possibilities for action are likely to make the biggest difference to a pursuer's effort to overcome the obstacle frustrating goal pursuit.

Social domains differ by how specialized helpers' goal-relevant knowledge must be, how skillful helper-navigators must be, and how refined helpers' discernment must be. Put differently, the earlier discussion about the different social domains in which helpers may be found suggests that those social domains may be sorted by how easily anyone in the domain might reasonably take on the helper role and successfully help a pursuer navigate an obstacle to goal pursuit. Consider, for example, data Irions and Zhan collected in 2012 about how international students learned rules for appropriate social interactions with people in their host countries. The participants in the study were asked to report the most important social interaction rule they learned and from whom they learned the rule. In our terms, international students were pursuers who needed helpers to help overcome the socio-cultural communication obstacles in their paths to good relationships with important people in their host countries. Preliminary analyses revealed that many international students identified the same small set of social interaction rules as important. Crucially for our analysis of helpers' substitutability, participants reported learning the social interaction rules from such diverse helpers as host families, classmates, teachers, and, in some cases, strangers. It is significant that international students learned the same rule from helpers whom they had different kinds of interpersonal relationships with and who came from different parts of their social worlds. These data suggest that,

when it comes to helping international students learn important social interaction rules to overcome obstacles to appropriate communication, most people encountered will be sufficiently expert for the students' purposes. Thus, helpers for learning social interaction rules seem to be highly substitutable.

Compare the prior implication about helpers' substitutability with that from Irions and Nichols (2016). Irions and Nichols collected data about the conspiracy theories people believe and whether believers tell other people about those conspiracy theories. In helping terms, Irions and Nichols collected data about who evangelized conspiracy theories, about the conspiracy theories these helpers evangelized, and about how and why these helpers shared their beliefs with people in their social networks. As expected, analyses supported the contention that conspiracy theories are narratives that simplify the social world by stripping complexity and ambiguity from social events. It is worth noting that many of the conspiracy theories participants reported were arguments that relied on evidence that was difficult to obtain, difficult to verify, and/or difficult to find counterevidence for. As a result, if participants had wanted to confirm or disconfirm the veracity of the conspiracy theories they reported, they would have had to find helpers with highly specialized knowledge (e.g., the thermodynamics of burning jet fuel, Michael Jordan's gambling history) and a well developed ability to discern which evidence is credible and relevant and for how much evidence is sufficient. This study suggested that people who sought to overcome obstacles to removing ambiguity about the veracity of a conspiracy theory would need helpers who are experts in relevant domains. Because fields typically have few experts relative to those who are conversant in a field's major contours or who

have a passing interest in the field, finding helpers sufficiently expert to confirm or disconfirm a conspiracy is difficult, thus making these helpers highly non-substitutable.

The preceding discussion suggests that social domains may also be ordered by how substitutable potential helpers are. Helpers' differing substitutability or, put differently, the likelihood that the average person could be a successful helper, has implications for pursuers' success in overcoming obstacles to desired future states. As a result, the following propositions are offered:

Proposition 4

> In social domains where helpers are highly non-substitutable, as compared to social domains where helpers are highly substitutable, pursuers will have a smaller chance of encountering a helper.

Proposition 5

> In social domains where helpers are highly non-substitutable, as compared to social domains where helpers are highly substitutable, pursuers will have greater certainty that the helper will be able to help them successfully overcome obstacles to their desired future states.

Existing Empirical Evidence About Helpers

As noted earlier, because the three major models of goal pursuit were in disunion, there is scant empirical evidence about who helpers are, how pursuers recruit them, what specifically helpers do (in addition to the communication helpers use), under what conditions helper's actions are effective, and what happens to the pursuer-helper relationship as a result of whether the pursuer attains the goal. Certainly, there is a quite a bit of evidence

from the extensive social-support literature that addresses relationships among helpers' demographics and personality variables, the type(s) of social support they provide pursuers, and how pursuers feel about the social support they received and the social support they wanted but did not receive. That literature is of limited use for our purposes because it does not regard social support as occurring within episodes of social goal pursuit and therefore lacks the ability to connect the interpersonal variables measured with the strategic, goal-pursuit constructs of interests here. A positive consequence of having little empirical evidence is that we may pursue an in-depth examination of all existing studies and lines of research that provide empirical evidence about helpers. Discussing existing empirical evidence and the limitations of the studies that generated it is necessary to integrate the existing empirical evidence and the theoretical foundations discussed in previous sections to yield the hypotheses that are the focus of this investigation and which will be presented in a subsequent section.

In this section, evidence supporting wingpeople's effectiveness will be presented first, evidence describing what wingpeople do will be presented second, and wingpeople's strategies and tactics will be presented last. It is important to note that the use of wingperson instead of helper in this paragraph was intentional: The extant studies and therefore the studies reviewed all focus on courtship helpers, who are colloquially called wingpeople. Consequently, this section will refer to wingpeople instead of helpers because the studies discussed only study helpers that operate in the courtship domain. For similar reasons, this section will refer to pursuers as pilots for metaphorical and linguistic clarity. This section will conclude with a discussion of the limitations and critiques of the

studies and a discussion of how research about wingpeople specifically and helpers in general should advance.

Wingpeople Are Effective

Wingpeople's effectiveness is the first matter addressed because it provides the warrant for further study of wingpeople and helpers. To that end, the two studies concerning the effectiveness of wingpeople are reported here.

Weber, Goodboy, and Cayanus (2010) sought to determine how appropriate and effective people believed five types of opening lines were in initiating heterosexual romantic relationships. The five types of opening lines investigated were: the man directly introduced himself to the woman; the man directly complimented the woman; the man attempts to be humorous toward the woman; the man uses a clichéd pick-up line on the woman (e.g., "Did you hurt yourself when you fell out of Heaven?"); and a third-party introduction from the man's friend (e.g., "Have you met my friend Josh?"). To explore this question, Weber et al. (2010) produced five two-minute videos by renting out a bar to film in, contracting professional audio engineers, and hiring two actors to perform each opening line in the context of a stereotypical heterosexual initial romantic encounter.. Six hundred forty-two undergraduates, 312 of whom were women, were randomly assigned to watch one of the five opening line performances and rate the opening line's effectiveness and appropriateness. Of the five types of opening lines, participants rated the third-party introduction from a wingperson as the most effective type of opening line. Participants rated both third-party introduction and direct introduction as the most appropriate opening lines. Thus, in the estimation of both male and female observers, wingpeople's

introductions are the most appropriate and effective way to initiate romantic relationships.

Clark, Shaver, and Abrams' (1999) studies were motivated by goals that were similar to but broader than the goals of Weber et al. Clark et al. sought to learn what undergraduates do to initiate romantic relationships and how undergraduates evaluate those initiating behaviors. To do that, Clark et al. first collected data about what undergraduates would do to initiate a romantic relationship with someone if they were single and attracted to another single person who might be attracted to them. Three hundred one undergraduates, 183 of whom were women, described how likely they would be to use the following strategies the researchers listed: offering self-disclosure, direct initiation; indirect signaling to the target; manipulating the situation; joking with the target; display resources; use a third-party introduction; and passively let the other person make the first initiation move. Participants also provided data about how open, proficient, agreeable, potent, flirtatious, phony, and inhibited they believed each of the strategies was. Clark et al. found that women were as likely as men to use a third-party introduction to initiate a romantic relationship in the hypothetical scenario. However, both men and women evaluated third-party introductions as not being particularly proficient, agreeable, potent, open, or flirtatious. However, participants evaluated third-party introductions as being moderately phony and inhibited. The second study Clark et al. reported was designed to allow participants to provide their own accounts of what they did and what they recall their partners doing to initiate their two most recent successful romantic relationships. Three hundred thirty participants, 153 of whom were women, provided those details and pro-

vided reports of their goals for pursuing those relationships. Nineteen categories of strategies emerged from participants' free-response data; third-party introductions were among the strategies described as being used to initiate successful romantic relationships. However, Clark et al. excluded third-party from subsequent analyses because determining whether it should be counted as a participant strategy or a partner strategy was too difficult. But, after reading participants descriptions of wingpeople, the authors concluded: "In contrast to Study 1, participants in Study 2 reported that third-party members were highly instrumental in relationship development, engaging in a variety of tasks including discovering whether a potential partner was available and interested in dating, promoting a potential partner, introducing dyad members to each other, and going out with a newly formed dyad" (Clark et al., 1999, pp. 719-720). Thus, we may take the anecdotal evidence reported in Clark et al. as some additional support for the contention that wingpeople are believed to be effective.

What Wingpeople Do

Although wingpeople may do many things in their attempts to help their pilots' overcome obstacles, seven studies from two lines of research provide insight into what wingpeople do. Two related studies focused on strategic information control and a third focused on providing help attracting or avoiding desirable and undesirable potential romantic partners. Each will be discussed in turn.

Strategically control information about absent pilots. Schlenker and Britt (1999, 2001) extended existing ideas about direct impression management (i.e., that people did impression management to benefit themselves and/or worked directly with others

to manage all parties' face) to the notion of indirect impression management. That is, Schlenker and Britt explored whether and under what circumstances people acted as wingpeople and helped an absent pilot manage the pilot's face to an important target. In both studies, Schlender and Britt proposed that wingpeople strategically give beneficial information about the absent pilot to the important other. Each study will be discussed in turn.

Schlenker and Britt's first (1999) study was exploratory and reported two experiments investigating whether people strategically provided beneficial information about an absent pilot to an important target in two domains of social life. In Experiment 1, Schlenker and Britt focused on romantic relationships. They hypothesized that people would strategically vary their descriptions of an absent pilot's personality as a function of how attractive the target was and what personality type the target preferred. One hundred seventy-two undergraduates, 152 of whom were women, participated in the experiment. Participants arrived to a lab with a same-sex friend under the guise of participating in a study about how acquaintanceships develop. Participants were told that one person in the friend dyad would have the role of discussant and confer with the discussant of another dyad; the other would have the role of associate and would supply information to one or both discussants. The friend dyads were then separated and did not communicate with each other until each had completed his/her participation in the study. Once alone, all participants were assigned to be the associate. Participants received bogus reports allegedly from their friends about the discussant from another dyad. These reports manipulated two independent variables: their friend's report about the target's attractiveness [desirable

(smart, physically attractive), unattractive (not smart, not physically attractive)] and the personality type the target preferred [extraverted, introverted]. The dependent variable was how outgoing and extraverted participants presented their friends as being. The dependent variable calculated by summing ratings of how characteristic of their friends various extraverted attitudes and behaviors were. Schlenker and Britt's hypotheses were supported: People strategically varied information about their friends' personalities depending on how attractive their friend thought the target was and what kind of personality the target preferred. When participants believed their friends found the target attractive, participants reported their friends as being statistically significantly more extraverted than introverted when they knew the target preferred extroverts. And, when an attractive target preferred introverts, participants reported their friends as being statistically significantly more introverted than extraverted. Participants responses to targets they believed their friends found unattractive did not follow the same pattern. There was no statistically significant difference in how extraverted or introverted participants reported their friends as being when an unattractive target preferred extroverts. But, when an unattractive target preferred introverts, participants described their friends as being much more extraverted than introverted. Participants also seemed to describe their friends' qualities with less enthusiasm to unattractive targets: means for participants' ratings of their friends' personality types were statistically significantly lower when the target was unattractive than when the target was attractive. Schlenker and Britt observed that "people may play an important role in regulating the contact their friends have with specific others by influencing

how appealing or unappealing their friends appear to be" (1999, p. 565).

In Experiment 2, Schlenker and Britt (1999) hypothesized that participants would do more beneficial impression management for an absent pilot when that pilot was a friend instead of a stranger, when participants inferred the pilot would have a greater need for it, and when they could send targets messages that would not contradict information the target already believed about the absent pilot. Unlike Experiment 1, Experiment 2 did not use romantic relationships as its domain. Instead, Schlenker and Britt used the domain of evaluating intelligence. One hundred seventeen participants, 64 of whom were women, participated in this experiment. The participants arrived to a lab with a same-sex friend under the guise of providing information about friendship dynamics and were told they would act as a research assistant in a second, purportedly unrelated study. The purpose of the second study was to evaluate using a promising new intelligence battery of unknown utility. As research assistant, participants would score, evaluate, and comment on the results of a partner's test of integrative ability, purportedly a cognitive skill of seeing connections among things that was important for business and educational success. The friend dyads were then separated and did not communicate with each other until each party had completed his/her participation in the study. Three independent variables were manipulated in this experiment: participants' relationship with their partners, the amount of social need participants inferred their partners needed, and their partner's performance on the cognitive-skills test. Participants' relationship with their partners had two levels, friend and stranger. These levels were manipulated by leading participants to believe that many friend dyads were participating at once and that they would be randomly assigned

to score and comment on their friend's results or a stranger's results. The amount of social need participants inferred their partners needed had two levels, high and low. Schlenker and Britt created the high social need condition by telling participants their comments about their partners' test results would be reviewed by the lead researcher in advance of a face-to-face interview with their partners about the partner's experience taking the new intelligence battery. The lead researcher would provide feedback to partners, based in part on participants' evaluations about the partner's performance and skills. The researchers created the low social need condition by telling participants the lead researcher would review their comments about their partners' scores, but that the lead researcher would not conduct an interview or provide feedback to the partners about their cognitive skills because the lead researcher was short on time. The third and final independent variable, partners' performance, had two levels, high and low. In the high condition, the partner scored in 93rd percentile with 14 correct responses on 15 items; in the low condition, the partner scored in the 14th percentile with 5 correct responses on 15 items. There were two dependent variables of interest in the second experiment: participants' evaluations of their partners' cognitive abilities and participants' attributions for their partners' performance. The results of this experiment largely supported Schlenker and Britt's hypotheses. First, participants reported statistically significantly higher evaluations of their partner's cognitive skills when they believed they were commenting their friends' cognitive skills compared to when participants believed they were commenting on a stranger's cognitive skills. However, the main effect of relationship type on reports of partners' cognitive

skills was qualified by whether participants believed their partners were going to undergo a face-to-face interview with the lead researcher who would evaluate their intelligence. In the order of descending means, participants reported the highest rating of their partners' cognitive skills for friends who were in social need; participants evaluated the cognitive skills of strangers who were in social need as being approximately the same as friends who were not in social need; and participants rated the cognitive skills of strangers who were not in social need as the lowest. It is crucial to note that partners' purported test scores (14 correct out of 15 or 5 correct out of 15) made no difference to the interaction of relationship type and social need on ratings of cognitive skills. Additionally, participants made more external attributions for their friends' test scores when test scores were low. Thus, the second experiment Schlenker and Britt (1999) reported provided support for their contention that people infer an absent pilot's goals might be in a situation and strategically vary information to help the absent pilot meet those goals. Schlenker and Britt's (1999) data demonstrated that people are more likely to perform this wingperson function when they think their friends are in need of such help and when they think their friend might benefit from a burnished reputation.

Schlenker and Britt followed up their two-experiment 1999 study with a two-experiment study in 2001. However, only the first experiment from Schlenker and Britt's (2001) study is relevant for our purposes. In this experiment, Schlenker and Britt (2001) sought to replicate their findings that people strategically vary information about an absent pilot based on their relationship with the pilot and how much they think the pilot

would benefit from having a burnished reputation. Schlenker and Britt extended their prior work by proposing that the amount of wingpeople's empathy moderated those relationships and that participants with stronger perceptions of the quality of their relationship with the non-present pilot would report performing more impression management. Schlenker and Britt (2001) used the same general procedure for this experiment that they used for Experiment 2 in their 1999 study. There was, however, a small difference: Instead of being told the test only assessed integrative ability, participants in this experiment were told that the integrative skills subtest their partners received was one subtest out of 25 subtests the partner could have been randomly assigned to receive. There were five independent variables in this study, three of which were manipulated and two of which replicated conditions from the second experiment reported in Schlenker and Britt (1999). The amount of empathy was an independent variable that researchers did not manipulate; participants completed self-report questionnaires about their ability to empathize with and take the perspectives of others. Perceived friendship strength was another independent variable the researchers did not manipulate. The third and fourth independent variables, relationship type [friend, stranger] and social need [low, high] were manipulated in the same manner reported in the second experiment reported in Schlenker and Britt (1999). The final independent variable was how important partners reported the integrative ability skill was to them. This independent variable had two levels: high importance to partner (the partner purportedly rated integrative ability as 3rd most important of the 25 possible skills) and low importance to partner (the partner purportedly rated integrative ability as the 22nd most important of the 25 possible skills). The dependent vari-

able of interest in this experiment was a single item asking participants to evaluate "how much integrative ability you think the test taker really has (irrespective of test score)." The dependent variable, a proxy for how much beneficial impression management participants did for their non-present partner, was regressed on possible permutations of friendship type, empathy, social need, and the partners' bogus ratings of how important "integrative ability" was to them. Of the fifteen terms in the regression, only three terms were statistically significant: relationship type ($\beta = 0.30$, $p < .001$), an interaction between relationship type and empathy ($\beta = 0.01$, $p = .01$), and a four-way interaction between friendship type, empathy, social need, and the partners' bogus ratings of how important "integrative ability" was to them ($\beta = 0.19$, $p = .02$). These results support the authors' hypotheses: Participants did more impression management for their friends, a tendency that increased as participants' abilities to empathize increased. In a second multiple linear regression, the dependent variable was regressed on possible permutations of friendship type, friendship strength, social need, and the partners' bogus ratings of how important "integrative ability" was to them. Of the fifteen terms in this second regression, only two were statistically significant: relationship type ($\beta = 0.33$, $p < .001$) and an interaction between relationship type and relationship strength ($\beta = 0.24$, $p = .01$). The results from this second multiple linear regression support Schlenker and Britt's hypothesis that people tend to provide more impression management the stronger they perceive a friendship bond to be.

Cooperative courtship. Cooperative courtship is a phenomenon that occurs

when individuals work together to increase one's mating opportunities or to help one of them avoid an undesirable mate. Ackerman and Kenrick (2009) conducted four studies to investigate whether humans, like other species, recruited others to help them gain access to mating opportunities and/or to help them avoid undesirable mates. Ackerman and Kenrick offered two related arguments that served as the foundation of their investigation. Human females, like the females of many other species, bear heavy costs associated with becoming pregnant and raising offspring. These costs are compounded by choosing an unsuitable mate. As a result, cooperative courtship strategies designed to benefit women should help women construct barriers to keep away low-quality mates and mates interested only in short-term relationships (defensive wingmanning). Human males, however, bear relatively few costs associated with pregnancy and child-rearing and, an error-management-theory analysis indicates that men experience more fitness penalties from missing courtship opportunities than engaging in too many courtship opportunities (Haselton & Buss, 2000). As a result, cooperative courtship strategies designed to benefit men should help men eliminate barriers to access (offensive wingmanning).

In their first experiment, Ackerman and Kenrick (2009) sought to learn whether people perceived opportunities for cooperation in romantic scenarios with three or more parties and whether people associated with barrier-building behaviors with women and barrier-breaking scenarios with men. Forty-four people, 30 of whom were women, participated in the experiment. Participants were presented with three cartoon schematics, featuring circles labeled A or B, arrows indicating which circle was the target of another circle's contemplation, and, occasionally, a thumbs-up symbol or a thumbs-down symbol,

indicating one circle's attitude about another circle. Participants were asked to label each circle as male or female, to describe the scenario as cooperative or competitive, and to report how likely or unlikely similar scenarios were in their own lives. The first schematic depicted an A circle thumbs-upping a B circle that thumbs-downed in response and subsequently leaving the A circle to move near another B circle. Participants reported this was a likely cooperative avoidance scenario where A was a man and Bs were women. The second schematic depicted a B circle moving near two As circles that were already near a B circle, with A1 and B2 subsequently pairing off and moving away from A2 and B1. Participants reported that this was a likely cooperative access-granting scenario where As were women and Bs were men. The third schematic depicted an A circle joining a triad of two B circles, one of which a second A circle thumbs-upped before two A-B pairs formed and moved away from each other. Participants reported that this was a likely cooperative avoidance scenario where As were men who had gained access and Bs were women who had each gained barriers. This initial experiment provided support for Ackerman and Kenrick's contentions that people can and do perceive multiparty interactions as cooperative and not necessarily competitive, that men seek romantic access and that women seek romantic avoidance. Ackerman and Kenrick concluded that "people readily [saw] cooperation in the drawings because the see cooperation in real life" (2000, p. 1290).

In the second experiment, Ackerman and Kenrick investigated the hypotheses that women would report receiving more avoidance help than men and that men would report receiving more access help than women. To test these hypotheses, Ackerman and Kenrick

asked 151 undergraduates, 41 of whom were women, to imagine a real same-sex friend and answer the following two questions: How frequently does your friend help you to avoid people you are not romantically involved in? How frequently does your friend help make it easier to attract people you are romantically interested? Both single-item measures were measured on a 0-6 Likert-type scale, where 0 indicated never and 6 indicated "all the time." The results supported Ackerman and Kenrick's hypothesis: Women reported receiving statistically significant more avoidance help from women than men received from men, and men reported receiving statistically significantly more access help from men than women reported receiving from women. Additionally, with few exceptions, participants reported that their single friends helped them more frequently than did their friends who were in romantic relationships. Attached men were statistically significantly more likely to give access help than single men were, which the researchers attributed to the lessened pressures of intrasexual competition from the attached male friends.

Ackerman and Kenrick tested two hypotheses about the helping behaviors of opposite-sex friends in the third experiment. The first hypothesis contended that opposite-sex friends should be better at giving strategies they know than strategies they are unfamiliar with. (An example of this receiving argument is that women should prefer giving their male friends avoiding help because avoiding help is what women want and experience the most.) The second hypothesis contended that because people are sensitive to sex differences in romantic selectivity, friends should be flexible and be able to provide the help their opposite-sex friends need. (An example of this provisioning argument is that women should prefer giving their male friends access help because access help is what

men are likely to prefer.) To test these hypotheses, Ackerman and Kenrick used nearly the exact same procedures from the second experiment described above, with one crucial difference. This time, Ackerman and Kenrick asked 193 undergraduates, 108 of whom were women, to imagine a real opposite-sex friend and answer the same two questions about frequency of avoidance and access help that friend provides. The results of this experiment replicated the results from the second experiment, but with an important caveat. Specifically: women reported receiving statistically significantly more avoidance help than access help from men, and men reported receiving statistically significantly more access help than avoidance help from women. Unlike in the second experiment, male friends provided more avoidance help than access help, and female friends provided more access help than avoidance help. As the authors noted, experiments 2 and 3 show that people flexibly offer help by providing the type of help their friend's sex indicates their friend should need.

The final experiment investigated whether people cooperate or compete with others in a romantic situation if given a choice. To investigate this question, Ackerman and Kenrick instructed undergraduates to bring a same-sex, similarly aged friend to a laboratory without divulging to them the nature of the study beforehand. As a result, 139 people, 65 of whom were women, participated in this study. After arriving at the lab with a same-sex friend, all participants were told that they would participate in the Dating Game, a study of decision-making in romantic relationships. Participants were told they would all have the opportunity to meet and rate an opposite-sex Dater, that Dater would be able to meet and rate two of them, and that if they and Dater matched, they would go

on a date and fill out a post-date questionnaire. Participants were asked to complete a bogus personality questionnaire while Dater's first meeting with another participant occurred. During this time participants also reviewed Dater's bogus personality questionnaire, which contained the manipulation for the Dater Attractiveness independent variable. Attractive Daters were presented as outgoing and interesting; unattractive Daters were presented as quiet and judgmental. Afterward, participants were allowed to briefly look at the bogus contestant's review of Dater (purportedly completed after their meeting occurred) which reinforced the information on Dater's personality questionnaire. At this point, the experimenter measured the dependent variable by announcing to participants a change in the structure of the Dating Game. The experimenter offered participants a choice about how they could spend their time with Dater. Participants could choose to use their time to meet with Dater as planned (self option), give up their time so the other contestant could have a second meeting with Dater (partner option), or allow the other contestant to join their time with Dater (group option). After deciding how to spend their time, participants were asked to explain their choice, why they engaged in cooperative courtship in the past, and about the perceived efficacy and benefits of cooperative courtship. The results of this investigation indicated that men were more likely than women to choose the self option and women were more likely than men to choose the partner option, but that participants were more likely to choose the self option if the other contestant was a stranger, and more likely to choose the group if the other contestant was a friend. Men chose the group option more when they were friends with the other contestant; women, however, were equally likely to choose the group option regardless of their

relationship with the other contestant. It is important to note that Dater's attractiveness affected participants' group choices. Specifically, men were more likely to choose the group option when Dater was attractive, but women were more likely to choose the group option when Dater was unattractive. Ackerman and Kenrick argued that these findings support their contention that men choose group for access help and women chose group for avoidance help. However, the rationales participants offered about why they chose group seem incongruent with the authors' conclusion. Specifically, nearly half of participants reported choosing the group option because they wanted help avoiding Dater, and a further forty percent chose the group option because they wanted to evaluate Dater. The incongruence of these rationales with Ackerman and Kenrick's contention that they support their sexed notions of help is further amplified when one considers that men and women were as likely to report that as their reason for their choice, as were participants who were single and in relationships. Finally, when participants were asked what they got out of past instances where they helped others access or avoid mates, Ackerman and Kenrick found that approximately a quarter of participants reported feeling satisfied with themselves, approximately a quarter reported feeling confident that they secured future cooperative courtship help, and approximately a quarter reported that their cooperative courtship help served as friendship maintenance.

How Wingpeople Do It

Only Irions (2013) investigated how wingpeople's communication strategies and tactics flow from the goals they pursue on behalf of pilots. The major question that moti-

vated this investigation was why romantic wingpeople help others. Irions argued that, in the domain of courtship, offensive wingpeople experience large costs associated with helping another person pursue a romantic interest. Offensive wingpeople help attract an attractive potential romantic partner only to then pass that potential mate to someone else, thus missing out on a mating opportunity and missing out on other mating opportunities they could have pursued for themselves instead of helping their pilots. Defensive wingpeople help pilots repel a potential mate that the pilot finds unattractive. Consequently, defensive wingpeople may lose out their own mating opportunity if they found the potential mate attractive and, because repelling other people is an act that threatens wingpeople's positive face (Brown & Levinson, 1987), wingpeople may incur social penalties that persist beyond the wingmanning episode. Thus, learning what motivated wingpeople to help pilots in the face of such costs was a primary concern. To answer that question, Irions extended Clark and Mills' work about what motivates actions that benefit a relational partner (Clark, 1981, 1984; Clark & Mills, 1993) to include a third motive, the personal motive. As a result, Irions hypothesized that wingpeople acted from one of three motivations: *personal* (wingpeople would help another person remove an obstacle to goal pursuit primarily because doing so directly benefitted the wingperson or satisfied her concerns (e.g., identity goals)); *dyadic* (wingpeople would help another person remove an obstacle to goal pursuit primarily because doing so paid down the wingperson's existing relational debt and/or because doing so created a future obligation for the pilot to pay to the wingperson); and *communal* (wingpeople would help another person remove an obstacle to goal pursuit primarily out of concern for increasing or maintaining the pilot's

wellbeing and without regard to obviating or creating relational debt). Because it was an exploratory study, Irions posed additional research questions concerned whether offensive wingpeople and defensive wingpeople reported acting from different patterns of motives, the goals, strategies, and tactics wingpeople pursue, and whether offensive and defensive wingpeople pursue goals and use different tactics.

Participants were 90 undergraduates, 63 of whom were women, who said they could recall a time in the recent past when they had helped another person attract a desirable romantic partner or avoid an undesirable romantic partner. Participants responded to open-ended questions about what they did as wingpeople and how they became a wingperson for the pilot they described and their responses were coded. Irions began by reporting frequency data about wingpeople's sex, the pilot's sex and offensive or defensive function. Approximately two-thirds of participants reported performing offensive wingpeople functions. The proportion of women who reported performing offensive and defensive functions was roughly equal but nearly three-quarters of men reported performing offensive functions. Although some participants reported being a wingpeople to an opposite-sex friend, nearly 90% of participants reported being wingpeople for a same-sex friend. With respect to the first hypothesis: Irions found that the three-motive proposal accounted for approximately 85 percent of defensive wingpeople's motives and 90 percent of offensive wingpeople's motives. Moreover, offensive and defensive wingpeople reported different frequencies of each motive. Nearly 30 percent of offensive wingpeople reported acting from a personal motive and another 30 percent a communal motive; approximately a fifth of offensive wingpeople reported acting from a dyadic motive. Defen-

sive wingpeople, however, reported a different pattern of motives. Nearly sixty percent of defensive wingpeople reported acting from communal motives, approximately a third reported dyadic motives, and approximately 7 percent reported personal motives. Because the motives proposed in this study were derived in part from patterns of exchange in interpersonal relationships, these results suggest that people who act as offensive and defensive wingpeople have different kinds of relationships with their pilots because their patterns of monitoring exchange-related quantities seems to be different. These results may also suggest that certain kinds of people are attracted to relationships with pilots who can offer them their preferred methods for investing in relationships.

Although both offensive and defensive wingpeople reported concerns about the pilot's wellbeing as most frequently motivating their wingmanning, participants' responses revealed that offensive and defensive wingpeople appear to attend to different facets of their pilots' wellbeing. Two characteristic examples of this difference follow. Participant 041, who reported being an offensive wingperson, wrote: "[My friend] was still not over his ex girlfriend who he dated in high school, and he was being shy, but i could tell by the way he looked at her that he liked her, and she was rather attractive . . . I genuinely wanted to help my friend put himself out there. We are good friends" (Irions, 2013, p. 16). Participant 008, who reported being a defensive wingperson, wrote: "A person was trying to come onto my friend, later my friend told me that it made them uncomfortable and that they didn't want to talk to them anymore. So I talked to and stayed by my friend the whole night" (Irions, 2013, p. 16). Thus, we see that offensive wingpeople seem to

primarily attend to their pilots' happiness, whereas defensive wingpeople seem to primarily attend to their pilots' safety and comfort.

Irions (2013) also found that the goals wingpeople pursued depended in part on whether they were offensive or defensive wingpeople. Five types of goals for removing obstacles emerged from participants' responses: attract a target, repel a target, engage and neutralize a target's wingperson, isolate the target, and leave no pilot behind. It is important to note that participants could report pursuing multiple goals and these data indicate that they did. Most defensive wingpeople reported pursuing two aligned goals (repel target and leave no pilot behind). A small minority of offensive wingpeople reported pursuing multiple goals, in part because nearly 85 percent them sought to attract the target. A smattering of offensive wingpeople reported pursuing engaging and neutralizing the target's wingperson, isolating the target, and leaving no pilot behind; no offensive wingperson reported pursuing the repel-target goal.

As with goals, the communicative tactics wingpeople reported using depended in part on whether they were offensive or defensive wingpeople; the tactics both offensive and defensive wingpeople used could be organized using the social-support framework discussed earlier. The data showed that the typical offensive wingperson used a mean of three tactics, while the typical defensive wingperson used a mean of two tactics. wingpeople reported using a mean of three tactics, whereas defensive wingpeople reported using a mean of two tactics. Several reasons could account for this finding about tactics: offensive wingpeople need to employ more tactics and/or more ingenuity to achieve their

goals; offensive wingpeople pursue more targets than defensive wingpeople (who typically are concerned with avoiding a single target) and change their tactics as the target changes; defensive wingpeople (who reported using only five of the fourteen possible tactics) know what an effective tactic combination is and enact that combination ad nauseam instead of experimenting with combinations of tactics in order to find an effective combination as offensive wingpeople (who reported using ten tactics) might. The fourteen tactics that emerged from participants' were responses were grouped into two major categories: willing subordination to the pilot and relationship management. Five types of willing-subordination tactics emerged from wingpeople's responses: compliment the pilot to the target, diminish one's own attractiveness, make oneself unattractive, make the pilot unattractive, and avoid pursuing the target. Offensive wingpeople reported using all willing-subordination tactics except making the pilot look unattractive; the most frequently reported were complimenting the pilot to the target and not pursuing the target themselves. Defensive wingpeople reported using only three of the willing-subordination tactics (make self unattractive, make pilot unattractive, don't pursue the target). Although a few defensive wingpeople endorsed making themselves and the pilot unattractive, willing subordination tactics were not among the tactics defensive wingpeople reported using most frequently. Nine tactics that can be grouped into three categories of three tactics each constitute the relationship management supracategory. The three subcategories in the relationship management supracategory follow the conceptual development of relationships: relationship management tactics to initiate relationships, relationship management tactics to maintain relationships, and relationship management tactics to terminate

relationships. The same three tactics were used to initiate, maintain, and terminate relationships: using communication to manipulate the wingpeople's, pilots', or target's physical locations; using communication directly to guide conversations; and using communication to manipulate or maintain the wingpeople's, pilot's or target's social networks. Whereas offensive wingpeople reported using each of the six communication tactics to initiate and maintain relationships, defensive wingpeople exclusively used communication to terminate relationships, mainly by disrupting the pilot's and target's physical proximity and conversations.

Limitations of Empirical Studies of Wingpeople

The empirical work reviewed in this section serves as an important foundation about what wingpeople in particular social domains do to pursue goals on behalf of others. However, there are some serious conceptual and methodological limitations to this work that must be addressed in future studies that investigated wingpeople. Two major categories of limitations will be discussed: limitations of statistical power and limitations of ecological validity. Each will be addressed in turn.

The first major limitation is statistical power. Of the studies reviewed here, only Irions' (2013) study treats participants' narrative data as important and deserving of close inspection because it reveals how and why wingpeople do what they do. Irions used a mixed-methods approach to analyze her data. So although questions of statistical power are not relevant to her qualitative analyses, they are relevant for her statistical analyses. A major limitation of Irions' (2013) study is that the quantitative portion was underpow-

ered. The result of an underpowered study is that statistically significant effects may not appear because the study lacks the power to detect small or moderate statistically significant effects. Because one of the most efficient methods of increasing statistical power is to increase a study's sample size, future studies of wingpeople should recruit enough participants to reach or, ideally, exceed the community standard of minimum power (β = .80).

A second major limitation concerns ecological validity. Limitations of ecological validity in these studies occurred in a variety of ways and arose from a variety of causes. One kind of limitation of ecological validity concerns the type of support the participants in these studies could provide and how that support was measured. Theories and investigations of social support find that there are three common categories of enacted social support – instrumental, emotional, and informational support – and other frameworks include the interpersonal behaviors of offering new perspectives on a problem, giving reassurances, as social support, too. Others, couched in social-network research, include such activities as the opportunity to communicate with people in different social groups (Goldsmith, 2004). The studies summarized above artificially limited and poorly measured the kinds of support participants could provide. For example, to measure the amount of impression management participants did for their absent pilots, Schlenker and Britt (2001) used a single item ("How much integrative ability do you think the test taker really has (regardless of test score)?") measured on an overanchored seven-point Likert-type scale with a focus on partner attributes that are in the same domain as the potentially face-threatening (but bogus) integrative ability skill. Aside from methodological limitations

(which Ackerman and Kenrick (2009) also commit in their first three experiments), this procedure and question do not permit participants to enact other types of social support directed toward the target on behalf of the pilot (e.g., esteem support and information support to improve self-efficacy). This procedure and question also does not permit participants to attempt to persuade the lead experimenter on their partners' behalves (e.g., the intelligence test is of questionable reliability). This methodological move has the effect of limiting our knowledge about how participants might have responded when faced with the freedom to enact the kinds of social support that they are most willing and able to provide and/or that the pilot is most in need of. A second limitation of ecological validity is that existing studies only provide insight into what undergraduate wingpeople do in only two dimensions of social life: romantic relationships and intelligence tests. As argued in the previous sections, wingpeople probably operate in most domains of human social life. Data collections should reflect this. A third limitation of ecological validity concerns wingperson recruitment and goal selection. Of the studies that allow wingpeople to act on a pilot's behalf, the wingperson must infer the pilot's goals and obstacles without the pilot's guidance (Ackerman & Kenrick, 2009; Schlenker & Britt, 1999, 2001). There is some empirical evidence that presuming to know a pilot's goals and acting on that knowledge causes the pilot to experience psychological reactance and can result in greater anger toward and dislike of the wingperson (e.g., Driscoll, Davis, & Lipetz, 1972; Irions, unpublished manuscript). When combined with the problem that those studies did not collect any data about whether wingpeople's actions were wanted, aligned with pilot's

goals, or effective, the ecological validity problem becomes serious and affects foundational knowledge about the wingperson-pilot relationship, what counts as an obstacle, and what counts as success. This limitation of ecological validity causes problems that extend beyond investigations of wingpeople. Communication science is concerned with using the scientific method to predict, explain, and control human communication (Jaccard & Jacoby, 2010). Doing that requires ample data collected in response to hypotheses derived from theories and with the spirit of testing the theory's generalizability, abstractness, and limits of usefulness (Kuhn, 2012). Nine studies conducted in two domains of social life are not sufficient for these purposes. It is vital for our unified model of social goal pursuit that more studies conducted in more social domains with actors other than heterosexual college undergraduates and with more attention given to how pursuers recruit helpers, how helpers affect pursuers' resources, the degree to which helpers are able to modify, redirect, or end pursuers' goal pursuit, and to the helper-pursuer relationship.

Chapter 3: Goals of the Present Research

In preceding chapters, the helpers construct was theorized and reported about and offered as as the construct that could unify and overcome the limitations of three major models of goal pursuit. The purpose of this chapter is to integrate the discussions from the first two chapters and derive from them the hypotheses and research questions that will guide this project.

Before continuing, it is important to note that this is an investigation of a nascent line of research. The theoretical framework of social goal pursuit and helpers was created for this project; it did not exist before. Results from this project will join fewer than a dozen other studies, studies that provided scant evidence about the periphery of the helper role in social goal pursuit. As a result of these considerations, this research project is exploratory and designed to address such fundamental questions about helpers as: Are helpers effective? Do helpers operate in domains of social life other than the courtship domain? Do helpers' motives change based on the social domain they operate in or whether they perform offensive or defensive functions? Although some may find these questions simplistic, their answers are important for addressing core issues a new model of goal pursuit so that future research can be well grounded in empirical reality. Therefore, hypotheses and research questions about helpers' effectiveness, helpers' motivations, helpers' effects on pursuers' resources, and helpers' substitutability will be offered below.

Hypotheses and Research Questions About Helpers' Effectiveness

In most cases, a paper's organization would proceed along the path suggested by

the conceptual structure of the theory under consideration, with hypotheses concerning outcomes presented last. However, this paper begins by presenting hypotheses concerning outcomes because, as noted above, helpers' general effectiveness is still an open question and its answers have serious implications for the viability of the line of research about helpers and this social model of goal pursuit.

An earlier section of this paper observed and described helpers in different social domains and another summarized existing empirical evidence (which was mostly about initiating romantic relationships) about them. Taken together, these discussions support the contention that some people in some domains seek out others for help overcoming obstacles to their goal pursuit at some point in their goal pursuit. Crucially, there is not yet any clear evidence that helpers are actually effective in helping pursuers overcome obstacles to their goal pursuit. The cause of this problem is both conceptual and methodological. With the exception of Irions (2013), past investigations of helpers proceeded under theories and from research lines that regarded helpers and their role in social goal pursuit as tangential to interpersonal communication phenomena. This conceptual decision led to the methodological cause of the problem of no evidence about helpers' effectiveness, which was that there was no theoretically justified reason to investigate outcomes associated with what was wrongly thought to be only a minor feature of a research design. Even Irions (2013), who focused on wingpeople as the phenomenon of interest, failed to gather data about wingpeople's effectiveness. Irions asked 163 participants whether they had been an offensive and/or a defensive wingperson for someone in the recent past; little more than half (ninety participants) had. And it is not known what pro-

portion of those ninety self-identified wingpeople successfully helped their pilot attract or avoid a romantic partner. So not only do we not have an estimate of how frequently helpers think their actions were successful, we do not know whether pursuers would agree with the helpers' estimations of their success rate. We are not even able to make the vague statement that some people in some domains turn to helpers at some point during goal pursuit because they believe that helpers wingpeople might be able to help them overcome an obstacle to goal pursuit – indeed, people might turn to helpers because obstacles make them anxious, hostile, depressed, and because, as Mephistopheles said, misery loves company.

The preceding sections attempt to correct the conceptual causes of this problem by treating helpers as the phenomenon of interest and explicitly theorizing about them (see Figure 1.2). Specifically, helpers are defined as actors who remove obstacles that blocking a pursuer's goal pursuit. Based on this theorizing, the following two ideas about success emerge. So, the first hypothesis about helper's effectiveness is definitional:

Hypothesis 1

> Evaluations of wingpeople's effectiveness will be positively related to perceptions that wingpeople helped the pilot overcome the obstacle blocking goal pursuit.

Helping pilots overcome an obstacle to goal pursuit is not necessarily the same as helping the pilots reach their goals. Removing obstacles to goal pursuit increases the chances that pilots successfully reach their goals, but it is no guarantee that they do. So although

Figure 3.1 Diagram of Pursuers' Decisions in the Model of Social Goal Pursuit

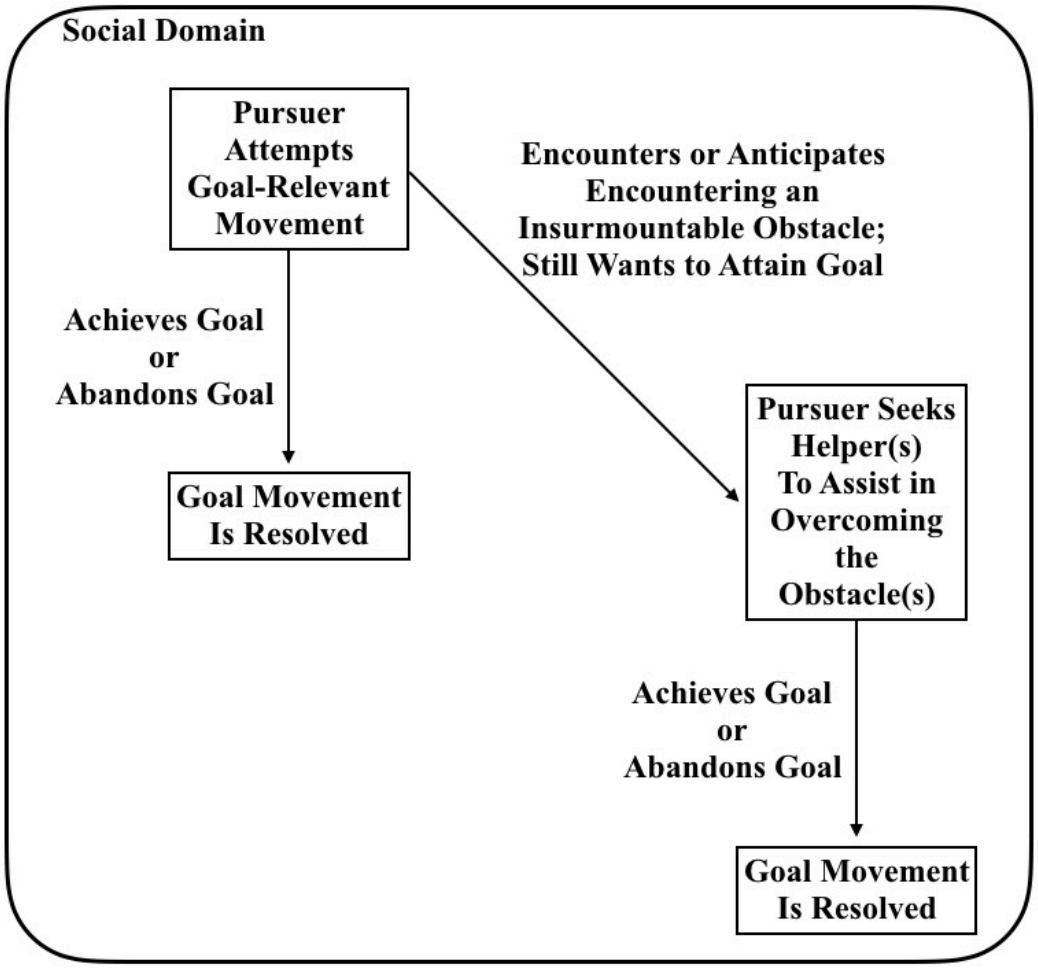

Figure 1.2 Diagram of the model of social goal pursuit from the pursuers' perspective. The first idea about success comes from the definition of helpers.

wingpeople may help pilots overcome obstacles to goal pursuit and be successful by definition, failure to reach the goal may be counted as a failed instance of wingmanning both wingpeople and pilots hypothesis about helpers' effectiveness takes an absolute, outcome-based view of helpers' effectiveness. Thus, the second hypothesis is offered:

Hypothesis 2

> Evaluations of helpers' effectiveness will be positively related to perceptions that helpers helped pursuers achieve the pursuer's goal.

Finally, helpers are presumed to adhere to a non-maleficence principle similar to that in the Hippocratic Oath because helpers seem to be committed to minimizing the troubles, inconveniences, and annoyances their pursuers experience (Irions, 2013). However, helpers' attempts to help pursuers overcome an obstacle may inadvertently create other obstacles that frustrate pursuers' goal pursuit. Because obstacles frustrate pursuers' ability to achieve their goals, the following hypothesis is offered:

Hypothesis 3

> Evaluations of helpers' effectiveness will be negatively related to perceptions that helpers created obstacles that frustrated pursuers' goal pursuit.

The next set of hypotheses about helper's effectiveness flow directly from the propositions about resources discussed earlier. To review: Helpers are thought to affect their pursuers' resources by increasing the number of resources pursuers can access, by diversifying the resources pursuers can access, and by showing pursuers how to make better use of their existing resources. When considering the three resources propositions in the context of the two definitions of wingpeople's success offered earlier in this section, the following six hypotheses result:

Hypothesis 4a

> Perceptions that helpers increased the number of resources available to pursuers will positively relate to perceptions that helpers assisted the pursuers in overcoming the obstacle(s) blocking goal pursuit.

Hypothesis 4b

> Perceptions that helpers increased the number of resources available to pursuers

will positively relate to perceptions that helpers assisted pursuers in achieving their goal.

Hypothesis 5a

Perceptions that helpers diversified the resources available to pursuers will positively relate to perceptions that helpers assisted the pursuer in overcoming the obstacle blocking goal pursuit.

Hypothesis 5b

Perceptions that helpers diversified the resources available to pursuers will positively relate to perceptions that helpers assisted pursuers in achieving their goal.

Hypothesis 6a

Perceptions that helpers showed pursuers how to make better use of their resources will positively relate to perceptions that helpers assisted the pilot in overcoming the obstacle blocking goal pursuit.

Hypothesis 6b

Perceptions that helpers showed pursuers how to make better use of their resources will positively relate to perceptions that helpers assisted the pilot in achieving their goal.

Earlier discussions of the resources propositions were general because helpers are thought to exist in many social domains. As discussed above (see Figure 1.1), social domains have unique constellations of affordances, constraints, possibilities for goal pursuit, and obstacles thereof. Because social domains differ in ways that can affect helpers' possibility for action and success, learning how helpers increase the number of pursuers'

resources, diversify their pursuers' resources, and show pursuers how to make better use of existing resources in different social domains becomes important. Collecting information about how helpers improve their pursuers' resources will permit us to learn whether helpers employ methods of social support unique to each social domain they operate in or whether helpers employ similar methods in across social domains. Helpers using similar resource-improvement methods in different social domains suggests that social domains could be organized by helpers' resource-improvement methods. Such an organization itself suggests that pursuers' chances for success may increase simply because more people in a domain could don and successfully perform the helper role for pursuers. Thus, the following three research questions about how helpers affect pursuers' resources are offered to begin clarifying these ideas:

Research Question 1a

How do helpers increase the number of resources available to pursuers?

Research Question 1b

How do helpers diversify the resources available to pursuers?

Research Question 1c

How do helpers show pilots how to make better use of their existing resources?

The final set of hypotheses about helpers' effectiveness stem from the earlier propositions about their substitutability. The fourth and fifth propositions suggested that pursuers looking for helpers in low-substitutability social domains (social domains in which pursuers can reasonably expect to have difficulty encountering many people able to don the helper role with reasonable chances of success) will have a smaller chance of

encountering helpers but greater confidence that the helpers they do encounter will be able to successfully help them achieve their goals. Thus, that the substitutability of social domains could exert both positive and negative effects on wingpeople's success. From one perspective, increasing the substitutability of social domains is predicted to exert a positive effect on absolute, goal-based effectiveness because there are more potential helpers that pursuers can encounter and recruit. From another perspective, however, increasing the substitutability of social domains could decrease pursuers' chances of success because helpers may exert less effort when assisting helpers because the mere presence of others in the environment may decrease the responsibility helpers feel for seeing their pursuers past their obstacles (Darley & Latané, 1968). Thus, the following competing hypotheses are offered:

Hypothesis 7

> The more non-substitutable a social domain, the less the perceptions of effectiveness and success will be.

Hypothesis 8

> The more the non-substitutable a social domain, the greater the perceptions of effectiveness and success will be.

Hypotheses And Research Questions Concerning Helpers' Motivations

The first set of hypotheses concern helpers' motivations to help pursuers. Irions (2013) argued and found initial support for the contention that three motivations spurred helpers to assist pilots in overcoming obstacles in their path to goal pursuit: personal motivations (helpers act primarily to satisfy their own interests and helping a pursuers was

incidental), dyadic motivations (helpers act to satisfy a debt or to obligate pursuers to future debts), and communal motivations (helpers act to improve or maintain their pursuers' wellbeing). Although Irions couched the argument about helpers' motivations in the social domain of courtships, the principles underlying her argument are domain-general. Thus, the three-motivation scheme should be able to be profitably applied to other domains of social life to explain helpers' motivations. Some may raise the point that it is inappropriate to apply a motivation scheme based in part on a way to describe interpersonal relationships (Clark 1981, 1984; Clark & Mills, 1993) in a more general way because some helpers in some domains may spontaneously help people with whom they have no pre-existing relationship (e.g., Eagly & Crowley, 1986; Levine, Norenzayan, & Philbrick, 2001). This point is not a serious concern because the motivational scheme Irions proposed can be applied to pre-existing relationships in which one person dons the helper role as well as to spontaneous relationships that arise as the result of someone spontaneously donning the helper role. Both strangers and relational partners can use the helping role to primarily satisfy their own interests and concerns. Both strangers and relational partners can act to create a debt, although it might be harder for strangers to collect on any future returns they might successfully obligate the pilot to. Finally, both strangers and relational partners can monitor someone's wellbeing and intercede to increase or maintain it – indeed, the theoretically and empirically supported premise underlying the bystander-intervention approach to reducing sexual violence on college campus is that anyone, friend or stranger, can and should act as defensive wingpeople and intercede to halt dangerous situations (e.g., Banyard, Plante, & Moynihan, 2004; Coker, Cook-Craig,

Williams, Fisher, Clear, Garcia, & Hegge, 2011; Gidycz, Orchowski, & Berkowitz, 2011). Thus, the following hypothesis replicates and sharpens the motivations hypothesis Irions (2013) proposed:

Hypothesis 9

> The three motivations (personal, dyadic, and communal) should account for nearly all the motivations helpers report for interceding on their pursuers' behalves.

In addition to providing initial empirical support for the utility of the three-motive scheme, results from Irions (2013) indicated that offensive and defensive helpers reported different patterns of acting from each motivation. Specifically, both offensive and defensive helpers reported acting from communal motivations most frequently. However, offensive helpers reported acting from personal motivations nearly as frequently as they reported acting from communal motivations, whereas most defensive helpers reported acting from communal motivations alone. This differential pattern of motivations could be a result of the specific domain of social life in which the helping occurs. If this *domain-based* pattern of motivations is the case, it implies that patterns of motivations change by social domain and that social life might be able to be organized by the pattern of helpers' motivations in each social domain. A second reason that offensive and defensive helpers reported different frequencies of motivations could be that there is some stable difference in the experience of and motivations for being an offensive or defensive helper. This *wingmanning-based* pattern of offensive and defensive motivations is the case, then it implies that there are reliable individual differences among the kinds of people who are drawn to doing offensive or defensive helping and/or that offensive or defen-

sive helping tends to result from or produce a certain qualities in the helper-pursuer relationship. Exploring and settling these questions seems appropriate for an exploratory investigation of helpers, so the following competing hypotheses about the domain-specific motivations and helper-based motivations and a research question are offered:

Hypothesis 10a (Domain-based)

> The proportion of offensive and defensive helpers acting from each motivation will be different across different social domains.

Hypothesis 10b (Wingman-based)

> The proportion of offensive and defensive helpers acting from each motivation will remain the same across different social domains.

Research Question 2

> What are the relationships between the motivations helpers report acting from and their qualities, their effectiveness, and the pursuer-helper relationship?

Irions (2013) found initial qualitative evidence that when offensive and defensive helpers act from communal motivations, they attend to different facets of their pursuers' wellbeing. Specifically, Irions found that offensive helpers acting from communal motivations appeared to attend to evidence of their pursuer's happiness, whereas defensive helpers acting from communal motivations appeared to attend to evidence of their pursuer's safety and comfort. This differential attention to aspects of pursuers' wellbeing might be a result of the specific domain of social life helpers were asked to report about. It might be that defensive helpers attend to their pursuers' safety and comfort because some activities required to initiate and end romantic relationships put pursuers at direct

risk of harms such as alcohol poisoning, sexual assault, and stalking. These harms, however, are not necessarily direct risks that pursuers must face in other domains of social life, so helpers may not need to look for or attend to such information in other social domains. This discussion raises a larger question about whether offensive and defensive helpers attend to different aspects of their pursuers' wellbeing in other domains of social life and what effect, if any, such attention has on helpers' effectiveness, the pursuers, and the helper-pursuer relationship. To explore this matter, the following research questions are offered:

Research Question 3

What aspects of pursuers' wellbeing do offensive and defensive helpers attend to?

Research Question 4

What is the relationship between the aspects of pursuers' wellbeing helpers attend to and perceptions of helpers' effectiveness and success?

A final set of research questions connects helpers' motivations to their effectiveness. There is reason to believe that helpers' reasons for interceding on their pursuers' behalves are related to helpers' effectiveness. Consider, for example, the responses from three defensive wingpeople who reported acting from different motivations. The first participant reported acting from a personal motive: "I find it to be an entertaining and fun challenge" (Irions, 2013, p. 27). The second participant reported acting from a dyadic motive: "I agreed to be a defensive wingperson since my friends have an understanding

that if one of us cannot get away on our own, we can signal to one another for help" (Irions, 2013, p. 27). The third participant reported acting from a communal motive: "I initiated the conversation [asking my very drunk friend] if she was really in the right mindset to decide if she wanted to leave [with the man hitting on her]. The goal was to make sure she was safe and didn't regret anything" (Irions, 2013, p. 28). The first participant, acting solely to satisfy his or her own desires for entertainment and a worthy challenge, may withdraw his/her help after those desires are satisfied and, crucially, before the pursuer successfully avoids an unattractive romantic prospect. In contrast, ensuring the pursuer successfully avoids an unattractive romantic partner is central to the third participant's communal motivation. The second participant's help is contingent upon how much assistance s/he received from friends in the past and upon how large a future obligation s/he wants to create for her friends. As a result, the second participant might be expected to balance being an effective helper with the amount of effort and effectiveness s/he received from friends in the past and could reasonably expect from friends in the future. Thus, the second participant, acting from dyadic motives, is expected to be more effective than the first participant who operated from personal motives because the second participant acting from dyadic motives and must provide a minimum level of success in order to secure a minimum level of returns or debt erasure for him- or herself. Because the quality of the second participant's efforts varies by the quality of help s/he received from friends in the past or hopes to receive in the future, the second participant may be less effective or as effective as the third participant who operated from communal motives. Although

this preceding discussion involved just three cases, these three cases exemplify a larger argument. Helpers acting from personal motivations may withdraw from the wingmanning interaction once their needs and desires have been satisfied, and this withdrawal may occur before pilots successfully overcome the obstacle separating them from a desired future state. Thus, helpers acting from personal motivations will be perceived as being least effective. Helpers acting from communal motivations act to ensure their pilots' wellbeing, and their pilots successfully overcoming obstacles to their goals is an inherent part of that. Thus, helpers acting from communal motivations should be the most effective wingpeople. Helpers acting from dyadic motivations are expected to act in accordance with the quality and effectiveness of helpan or other exchanges they received from pursuers in the past and/for hope to secure from them in the future. Thus, helpers acting from dyadic concerns are expected to be more effective helpers than those acting from personal concerns, and may be less effective or as effective as helpers acting from communal concerns. The following hypothesis summarizes these arguments:

Hypothesis 11

Helpers acting from personal motives will be perceived as less effective and successful than helpers acting from dyadic or personal concerns.

The next two chapters contain the details of studies conducted to test these hypotheses and explore these research questions.

Chapter 4: A Study About Wingpeople

The purpose of the study reported in this chapter is to replicate Irions' (2013) findings about romantic wingpeople. This study improves upon Irions' (2013) work by using a larger sample and coding for additional theoretically relevant variables, such as type of social support offered and why wingpeople stop working to help their pilots achieve their goals. Specifically, this study will provide data sufficient to evaluate Hypothesis 9 (The three motivations should account for nearly all motivations wingpeople report for interceding on their pilots' behalves) and explore Research Question 3 (What aspects of their pilots' wellbeing do offensive and defensive wingpeople attend to?). By gathering free-form data from respondents, this study also offers the opportunity to do further qualitative exploration of the wingmanning phenomenon, thus coding and analysis will not be restricted to just that sufficient to address Hypothesis 9 and Research Question 3. Many such codable matters appeared as the data were inspected.

Method

Participants

Although 354 participants began the questionnaire, only the data from the 247 participants who completed the questionnaire were analyzed to obtain a fuller understanding of the phenomenon. Participants were recruited from undergraduate communication classes at a large mid-Atlantic university and offered a small amount of extra credit in exchange for their participation in this study. Students were invited to participate in the study if they reported being able to clearly recall a time in the past three months in which they had been an offensive or defensive wingpman. (The study, the first, exploratory

study in this line of research, used the terms *wingman* and *wingmen* in questionnaires because it was thought that using terms participants would have encountered in popular culture would facilitate their understanding, thereby improving the quality of their recall and responses. The gender-neutral terms *wingperson* and *wingpeople* were adopted after this study's design and materials were approved by the Institutional Review Board and data were collected. Thus, the gendered terms will appear in this chapter when the study's materials are quoted and when participant's responses are quoted.) *Offensive wingman* was defined for prospective participants as "help[ing] someone obtain a desired other," whereas defensive wingman was defined as "help[ing] someone avoid an undesirable other." Participants could report about a time when they were an offensive wingman, a defensive wingman, or both. (If participants were able to report about being both an offensive and defensive wingman, they were free to report about one instance in which they enacted both roles or two separate instances in which they assumed those roles at separate times.) A handful of participants completed the questionnaire but indicated that they had not been romantic wingmen. Instead, these participants reported that, for example, they helped a younger sibling remove obstacles to improving grades at school. These unsolicited responses were the first suggestion that wingmanning might be a process that occurs in domains of social life other than courtship, and it is this suggestion that propelled the second study. However, their data were omitted from the main analyses for this study report.

An a priori power analysis was performed to determine how many participants should be recruited so this study could overcome insufficient power, one of Irions' (2013)

major limitations. The effect-size estimates used in this power analysis were based on the effect sizes Irions (2013) reported. Although Irions (2013) reported moderate effect sizes (Cramer's *V* ranged .22-.33 for χ^2 tests with few non-zero cells), the effect sizes used to estimate power needed for this study ranged .15-.35 to reflect a conservative approach to estimating the sample size needed to reach traditional levels of social-scientific power (i. e., $\beta = .80$). The details and results of that power analysis are presented in Figure 1 and a summary is presented here: Recruiting at least 250 wingpeople should be sufficient to detect moderately small effects at traditional social-scientific power levels. Thus, this study should have sufficient power to detect moderate effect sizes.

Figure 4.1 Study 1 *a Priori* Power Analysis

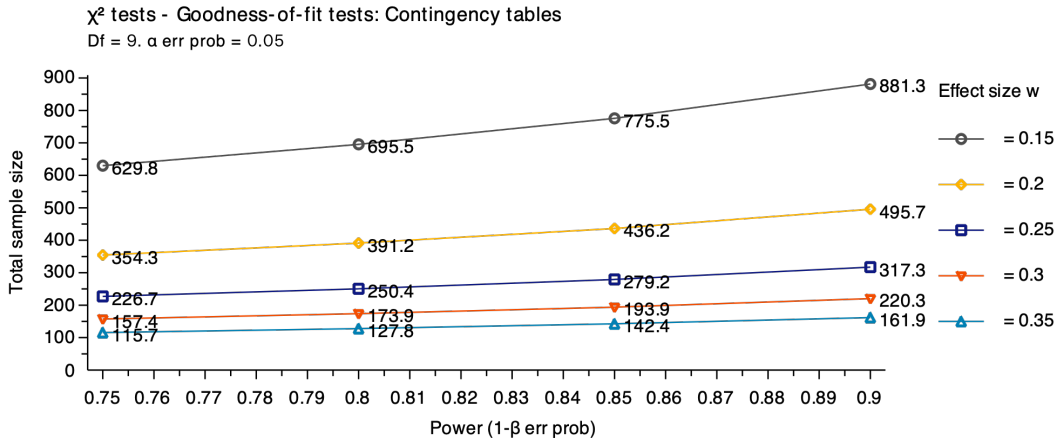

Figure 4.1. An *a priori* sample-size calculation for Study 1 as a function of 10 classes, effect sizes (w) ranging .15-.35, and alpha error probability of .05 using G*Power 3.1.9.2 for Mac. G*Power's calculations indicate that a sample of wingpeople greater than 250 participants would be sufficient to reach traditional levels of social-scientific power (i.e., $\beta = 0.80$).

Participants' mean age was 19.76 (*SD* = 1.90) and, of those respondents who reported their own sex, most were women (*n* = 140, 56.57%). Most of the people partici-

pants reported wingmanning for were also women (n = 148, 59.92%). All participants but one reported helping someone obtain or avoid a heterosexual encounter.

Questionnaire

The questionnaire was designed to obtain information about participants' experiences as offensive and defensive wingmen. Participants were first asked if they could recall being an offensive wingman in the three months prior to participating in the study; if they had, they were asked about their experiences as an offensive wingman. If they could not recall being an offensive wingman, they were asked if they could recall being a defensive wingman; if they had, they were asked about their experiences as a defensive wingman. As a result of this design, participants could report about an experience being an offensive wingman, their experience being a defensive wingman, or their experience being both an offensive and a defensive wingman.

The questions posed to offensive and defensive wingmen were the same because this study was designed to learn about differences and similarities in the communication and roles of offensive and defensive wingmen. Participants were asked to report about a specific wingmanning experience; they were then asked to describe more general wingmanning qualities, behaviors, and communication. Specifically, when reporting about a specific experience, participants were asked how they became a wingman, what they did in the instance they described, how they knew their pilots no longer needed or wanted their wingmanning, and what they got out of wingmanning. When reporting about general wingmanning qualities, participants were asked to describe what qualities, in general and from their experience, made someone a good or bad wingman, and what rules wing-

men should follow.

Coding

The unit of analysis for this study was the participant's entire response set. Two coders, one of whom was blind to the hypotheses and research questions, independently coded 10 percent of participants' responses. Disagreement was resolved through discussion, and the final codebook was modified to reflect these discussions (the codebook may be found in Appendix 1). Final intercoder agreement reached or exceeded $\kappa = .86$ for all categories, so the two coders each coded half of the remaining responses.

Coders identified seven major categories when reviewing participants' responses. The first two categories reflect abstract and general theoretical distinctions, whereas the last five categories represent general and abstract theoretical distinctions keyed specifically to the social domain of courtship. We must distinguish between general and abstract categories to follow the empirical findings and theoretical arguments that flow from the GPA model (Dillard 1990a, 1990b, 2004) and action-assembly theory (Greene, 1995, 1997, 2007). As discussed above, the GPA model and action-assembly theory suggest that people begin with general and abstract goals and use domain-specific strategies and tactics to increase their chances of achieving those goals. Using strategies and tactics from one domain may yield success in another, but chances of success increase when one tailors strategies and tactics to a specific domain.

There are three general categories coded for in this study. The first of these categories is the type of wingmanning provided. As discussed above, when helpers provide offensive wingmanning to pursuers, they attempt to remove obstacles so pursuers can

move closer to a desirable target or create obstacles between the undesirable target and the pursuer. Similarly, with defensive wingmanning, helpers attempt to remove obstacles so pursuers can move farther from an undesirable target. The second category is the motivation helpers act from. As discussed above, helpers may act from a personal motivation, that is, they help primarily to get something for themselves; any assistance pursuers might perceive is purely incidental to helpers satisfying their own needs and/or desires. Helpers may also act from a dyadic motivation, in which they regard their assistance as the means through which they can balance the scales of relational reciprocity (i.e., wingmanning to pay off a relational debt to the pursuer or wingmanning to create a future debt for the pursuer). Communal motivation is the final type of motivation wingpeople are theorized to act from. When acting from the communal motivation, helpers act to protect or increase the pursuer's wellbeing, safety, and welfare without regard for the relational debts they have or would like to create. The third code is targeting decisions, which provides insight into who decides what target to pursue. We coded for the pilot making targeting decisions, the wingperson making targeting decisions, the pilot and wingpeople jointly making targeting decisions, and, the pilot being targeted (which we recognize is a code that may be relevant only to particular social domains).

There are four specific categories coded for in this study. The fourth category overall and the first courtship-specific category is the outcome the wingperson desires to create for the pursuer. Five outcomes wingpeople desired for their wingpeople were coded for: to attract someone to their pilot; to repel a someone from their pilot; to engage with and neutralize a wingperson that the target might have; to isolate the target from

others; and to stay near a pilot until the end of an interaction.

The fifth category, tactics, has five major subcategories organized into two conceptually distinct and domain-specific tactics: tactics in which wingpeople provide a contrast between themselves and their pilots, and relationship-management tactics. Five tactics were coded for that draw a contrast between wingpeople and pilots: the wingperson actively increases the pilot's attractiveness; the wingperson actively lowers his/her attractiveness to below the pilot's but stops before appearing unattractive; the wingperson actively makes him- or herself unattractive; the wingperson actively makes the pilot unattractive; and the wingperson does not romantically pursue the target. There were three types of relationship-management tactics that were coded for across initiation, maintenance, and termination, the three stages of romantic relationships, for a total of nine codes. The three types of tactics that wingpeople could use to manage relationships were conversational tactics, physical tactics, and network tactics.

The sixth category concerns when wingpeople stop pursuing their pilots' objectives. First, wingpeople may stop pursuing their pilots' objectives when the wingpeople have evidence that the objective is achieved (e.g., their pilot has obtained a desirable person's phone number, a target who made the pilot feel unsafe was spotted leaving a bar) Second, wingpeople may stop pursuing their pilots' objectives when the pilot is satisfied, happy, or otherwise pleased with the wingpeople and/or the events the wingperson helped bring about, but without explicit confirmation that the motivating objective was achieved. Third, wingpeople may stop pursuing their pilots' objectives before the objective is achieved, but with the sense that the pilot can probably successfully pursue the objective

without the wingperson. Fourth, wingpeople may stop pursuing their pilots' objectives before the objective is achieved, but with the sense that their pilots are pleased. Fifth, wingpeople may stop pursuing their pilots' objectives before the objective is achieved and see their job as complete irrespective of whether their pilots are happy or their help is still needed. Finally, wingpeople may consciously abandon pursuit of their pilots' objective.

The seventh and final category describes the types of social support, if any, wingpeople reported providing their pilots. The codes in this category (informational, esteem, emotional, network, and tangible) follow Goldsmith's (2004) distinctions as discussed in the prior chapter.

Results

Results will be presented in four sections and organized to provide maximum conceptual clarity: type of romantic wingmanning provided, goals pursued while doing romantic wingmanning, strategies and tactics used while doing romantic wingmanning, and sex differences in romantic wingmanning. The analyses designed to test Hypothesis 9 (The three motivations should account for nearly all motivations wingpeople report for interceding on their pilots' behalves) and explore Research Question 3 (What aspects of their pilots' wellbeing do offensive and defensive wingpeople attend to?) will appear clearly marked in the relevant conceptual sections.

Type of Wingmanning Provided

The theory of wingmanning presented earlier suggested that there are two types of wingmanning a helper might provide: offensive wingmanning, in which helpers attempt

to bring their pursuers closer to a target, and defensive wingmanning, in which helpers attempt to distance their pursuers from a target. Participants in this study reported doing more offensive wingmanning (n = 148) than defensive wingmanning (n = 98). No one reported doing offensive and defensive wingmanning in the same instance. The rest of this section will present analyses describing the relationships among the type of wing-manning provided and the focal constructs of interest described in the prior section.

Hypothesis 9: Wingpeople's Motivations

First, participants' responses indicated significant differences in the motivations offensive and defensive wingpeople reported acting from ($\chi^2(6, N = 242) = 36.88$, $p <$ .001, Cramer's V = . 39, Table 4.1). Cramer's V is considered to be a moderately strong effect at values between 0.2 and 0.6. At this point we may address Hypothesis 9. Fewer than 1% of wingpeople did not report a motivation. Additionally, the personal motivation, a new conceptual distinction created for this theory of wingpeople, accounted, alone and in combination, for 43% of the motivations wingpeople reported in this study. Thus, we may say that Hypothesis 9 is supported: The three-motivation concept accounts for most of the motivations wingpeople offered for interceding on their pilots' behalves because the coding categories used here accommodated 99% of wingperson reports.

Table 4.1

Motivations for Wingmanning by Type of Wingperson

Motivations for Wingmanning		Type of Wingperson		
		Offensive	Defensive	Total
None in this category	Count	0.00	2.00	2.00
	Row%	0.00 %	100.00 %	100.00 %
Personal	Count	58.00	18.00	76.00
	Row%	76.32 %	23.68 %	100.00 %
Dyadic	Count	28.00	15.00	43.00
	Row%	65.12 %	34.88 %	100.00 %
Personal and Dyadic	Count	10.00	1.00	11.00
	Row%	90.91 %	9.09 %	100.00 %
Communal	Count	35.00	55.00	90.00
	Row%	38.89 %	61.11 %	100.00 %
Personal and Communal	Count	14.00	4.00	18.00
	Row%	77.78 %	22.22 %	100.00 %
Dyadic and Communal	Count	2.00	0.00	2.00
	Row%	100.00 %	0.00 %	100.00 %
Total	Count	147.00	95.00	242.00

$\chi^2(6, N = 242) = 36.88, p < .001$, *Cramer's V = . 39*

Furthermore, offensive and defensive wingpeople oriented to different aspects of their relationship with their pilots and to the pilots themselves. Several deviations from the non-contingent expected frequencies are worth mentioning (Table 4.1). First, offensive wingpeople reported acting from only the personal motivation (n = 58) more frequently than defensive wingpeople reported acting solely from the personal motivation

did (*n* = 18). Offensive wingpeople also reported acting from the personal motivation in combination more frequently (*n* = 24) than defensive wingpeople (*n* = 5). Second, offensive wingpeople reported acting from only the dyadic motivation (*n* = 28) more frequently than defensive wingpeople reported acting from the dyadic motivation (*n* = 15). Offensive wingpeople also reported acting from the dyadic motivation in combination more frequently (*n* = 12) than did defensive wingpeople (*n* = 1); this difference is largely due to offensive wingpeople acting from the personal motivation. Third, defensive wingpeople reported acting from the communal motivation (*n* = 55) more frequently than offensive wingpeople (*n* = 35). However, offensive wingpeople reported acting more from the communal motivation in combination more frequently (*n* = 16) than did defensive wingpeople (*n* = 4); this difference is largely due to offensive wingpeople acting from the personal motivation.

There are many potential explanations for the observed asymmetry in offensive and defensive wingpeople's motivations for wingmanning. For example, there might be traits about people who are offensive and defensive wingpeople that make them ideal for the role that are also associated with an increased likelihood to act from one motivation instead of another. It may also be that the tasks associated with acting as an offensive wingperson are such that offensive wingpeople are more inclined to seek opportunities for personal gain whereas those associated with being a defensive wingperson encourage people to orient toward a less transactional approach. Additionally, these observed differences may be particular to this sample and/or to the courtship domain. In any case, more research is necessary to learn the reason(s) for the differences observed in this study.

Wingpeople's Desired Outcomes

Another topic exploring the differences between offensive and defensive wingpeople concerns the outcomes they desired for the interactions. In the present context, goals are understood as being somewhat more specific than motivations. Participants' responses indicated significant differences frequency with which offensive and defensive wingpeople reported pursuing goals associated with wingmanning (χ^2 (10, N = 242) = 233.64, p < .001, Cramer's V = .98, Table 4.2). Cramer's V is considered to be a strong effect at values greater than or equal to .60. The results of this analysis confirm the conceptual distinctions between offensive and defensive wingmanning that were presented in the prior discussion of motivations: The most desired outcome for offensive wingpeople was attracting a target (n = 133) and the most desired outcome for defensive wingpeople was repelling a target (n = 72). No offensive wingperson reported wanting repel a target, either alone or in combination with other desired outcomes, and only two defensive wingperson reported wanting to attract a target, alone or in combination with other desired outcomes.

Table 4.2

Desired Outcomes by Type of Wingmanning

Desired Outcomes		Type of Wingmanning		
		Offensive	Defensive	Total
Attract a target	Count	133.00	1.00	134.00
	Row%	99.25 %	0.75 %	100.00 %
Repel a target	Count	0.00	72.00	72.00
	Row%	0.00 %	100.00 %	100.00 %
Engage and neutralize a target's wingperson	Count	2.00	0.00	2.00
	Row%	100.00 %	0.00 %	100.00 %
Attract a target and engage and neutralize a target's wingperson	Count	6.00	0.00	6.00
	Row%	100.00 %	0.00 %	100.00 %
Leave no pilot behind	Count	1.00	0.00	1.00
	Row%	100.00 %	0.00 %	100.00 %
Isolate a target	Count	1.00	1.00	2.00
	Row%	50.00 %	50.00 %	100.00 %
Attract a target and isolate a target	Count	1.00	1.00	2.00
	Row%	50.00 %	50.00 %	100.00 %
Repel a target and isolate a target	Count	0.00	9.00	9.00
	Row%	0.00 %	100.00 %	100.00 %
Attract a target and leave no pilot behind	Count	2.00	0.00	2.00
	Row%	100.00 %	0.00 %	100.00 %

Table 4.2

Desired Outcomes by Type of Wingmanning

Desired Outcomes		Type of Wingmanning		
		Offensive	Defensive	Total
Isolate a target and leave no pilot behind	Count	1.00	0.00	1.00
	Row%	100.00 %	0.00 %	100.00 %
Total	Count	147.00	95.00	242.00

χ^2 (10, N = 242) = 233.64, p < .001, Cramer's V = . 98

Upon inspecting those two defensive wingpeople's questionnaire responses, it appears that these defensive wingpeople shared the desired outcome of defending their friend by getting the target to become attracted to them instead of to their friend. Participant 101 explained: "Whether [the target] is desirable to you or not, keep their attention on you for the sake of your friend . . . If [the target] was clearly not right for my friend or if my friend was clearly not interested then I would have to take one for the team and distract [the target] from my friend. This usually involved bringing [their] attention to myself."

Targeting Decisions

The two types of wingpeople may have seen decision-making differently. Participants' responses indicated significant differences in how offensive and defensive wingpeople and their pilots made decisions about whom to target (χ^2 (5, N = 243) = 46.98, p < .001, Cramer's V = .44, Table 4.3). Specifically, offensive and defensive wingpeople seem to have different relationships with their pilots. Offensive wingpeople's pilots seem to be directive about whom to target and not particularly open to their wingpeople's opinions:

Pilots selected targets for their offensive wingpeople more frequently than would be expected by chance (n = 99) and more frequently than the wingpeople selected targets for their pilots (n = 28) or conferred with their pilots about whom to target (n = 13). Defensive wingpeople's pilots, however, seemed to be more open to their wingpeople's opinions about whom to target because defensive wingpeople selected targets for their pilots (n = 32) more frequently than they conferred with their pilots about whom to target (n = 25) or let the pilots select the target (n = 24).

Table 4.3

Targeting Decisions by Type of Wingmanning

Who Makes the Targeting Decision		Type of Wingperson		
		Offensive	Defensive	Total
None in this category	Count	5.00	4.00	9.00
	Row%	55.56 %	44.44 %	100.00 %
The pilot targets	Count	98.00	24.00	122.00
	Row%	80.33 %	19.67 %	100.00 %
The wingperson targets	Count	28.00	32.00	60.00
	Row%	46.67 %	53.33 %	100.00 %
The wingperson and pilot target together	Count	11.00	25.00	36.00
	Row%	30.56 %	69.44 %	100.00 %
The wingperson, and the pilot and wingperson target	Count	0.00	1.00	1.00
	Row%	0.00 %	100.00 %	100.00 %
The pilot is targeted	Count	2.00	8.00	10.00
	Row%	20.00 %	80.00 %	100.00 %
Total	Count	143.00	95.00	239,00

χ^2 (5, N = 243) = 46.98, p < .001, Cramer's V = . 44

Tactics

Wingmen's roles may imply different interactional tactics. Participants' responses confirmed that the conceptual distinctions between offensive and defensive wingpeople carry through to the tactics that each type of wingperson uses to accomplish their pilot's

goals. Each category of tactic will be discussed in turn.

First, there was a significant difference in how offensive and defensive wingpeople contrasted themselves with their pilots (χ^2 (6, N = 226) = 173.14, p < .001, Cramer's V = .86, Table 4.4). Offensive wingpeople attempted contrasts intended to improve their pilot's attractiveness to targets (n = 76), to avoid pursuing the same target the pilot was pursuing (n = 13), and a combination of these two tactics (n = 23). Defensive wingpeople, in contrast, did not report using these tactics, neither alone nor in combination. Defensive wingpeople did report, however, actively attempting to make the pilot less attractive (n = 64).

Second, there was a significant difference in how frequently offensive and defensive wingpeople reported using relationship-initiation tactics as they enacted their roles (χ^2 (5, N = 243) = 159.08, p < .001, Cramer's V = .81, Table 4.5). Offensive wingpeople overwhelmingly reported using conversation to initiate relationships between targets and their pilots (n = 108) and using conversation in combination with bringing targets' and pilots' social networks together (n = 14). Most defensive wingpeople (n = 90), however, did not report using any relationship-initiation tactics as they enacted their roles.

Next, there was no difference in how frequently offensive and defensive wingpeople reported using relationship-maintenance tactics (χ^2 (4, N = 246) = 2.70, p = .61, Cramer's V = .08, Table 4.6). This author suspects this result is because there were so few instances (n = 18) of either wingperson using relationship-maintenance tactics.

Table 4.4

Pilot Contrast Tactics by Type of Wingperson

Pilot Contrast Tactics		Type of Wingperson		
		Offensive	Defensive	Total
None in this category	Count	27.00	18.00	45.00
	Row%	60.00 %	40.00 %	100.00 %
Increases the pilot's attractiveness to the target	Count	76.00	0.00	76.00
	Row%	100.00 %	0.00 %	100.00 %
Increases the pilot's attractiveness and decreases own attractiveness to below the pilot's attractiveness	Count	2.00	0.00	2.00
	Row%	100.00 %	0.00 %	100.00 %
Actively makes self unattractive	Count	1.00	1.00	2.00
	Row%	50.00 %	50.00 %	100.00 %
Actively makes pilot unattractive	Count	1.00	64.00	65.00
	Row%	1.54 %	98.46 %	100.00 %
Does not romantically pursue the target	Count	13.00	0.00	13.00
	Row%	100.00 %	0.00 %	100.00 %
Increases the pilot's attractiveness and does not romantically pursue the target	Count	23.00	0.00	23.00
	Row%	100.00 %	0.00 %	100.00 %
Other	Count	3.00	10.00	13.00
	Row%	23.08 %	76.92 %	100.00 %
Total	Count	146.00	93.00	239.00

$\chi^2\,(6, N = 226) = 173.14, p < .001$, Cramer's $V = .86$

Table 4.5

Relationship-Initiation Tactics by Type of Wingperson

Relationship-Initiation Tactics		Type of Wingperson		
		Offensive	Defen-sive	Total
None in this category	Count	18.00	90.00	108.00
	Row%	16.67 %	83.33 %	100.00 %
Physically initiates	Count	3.00	2.00	5.00
	Row%	60.00 %	40.00 %	100.00 %
Conversationally initi-ates	Count	108.00	4.00	112.00
	Row%	96.43 %	3.57 %	100.00 %
Iniates through net-works	Count	1.00	0.00	1.00
	Row%	100.00 %	0.00 %	100.00 %
Conversationally initi-ates and initiates through networks	Count	14.00	0.00	14.00
	Row%	100.00 %	0.00 %	100.00 %
Total	Count	144.00	96.00	240

$\chi^2\,(5, N = 243) = 159.08, p < .001$, Cramer's $V = .81$

Table 4.6

Relationship-Maintenance Tactics by Type of Wingperson

Relationship-Maintenance Tactics		Type of Wingperson		
		Offensive	Defensive	Total
None in this category	Count	136.00	92.00	228.00
	Row%	59.65 %	40.35 %	100.00 %
Maintains physical proximity	Count	1.00	2.00	3.00
	Row%	33.33 %	66.67 %	100.00 %
Maintains conversation	Count	9.00	4.00	13.00
	Row%	69.23 %	30.77 %	100.00 %
Maintains physical proximity and maintains conversation	Count	1.00	0.00	1.00
	Row%	100.00 %	0.00 %	100.00 %
Maintains networks	Count	1.00	0.00	1.00
	Row%	100.00 %	0.00 %	100.00 %
Total	Count	148.00	98.00	246.00

$\chi^2\,(4, N = 246) = 2.70,\ p = .61$, Cramer's $V = .08$

Table 4.7

Relationship-Termination Tactics by Type of Wingperson

Relationship-Termination Tactics		Type of Wingperson		
		Offensive	Defensive	Total
None in this category	Count	145.00	7.00	152.00
	Row%	95.39 %	4.61 %	100.00 %
Physically terminates	Count	0.00	36.00	36.00
	Row%	0.00 %	100.00 %	100.00 %
Conversationally terminates	Count	3.00	37.00	40.00
	Row%	7.50 %	92.50 %	100.00 %
Physically terminates and conversationally terminates	Count	0.00	15.00	15.00
	Row%	0.00 %	100.00 %	100.00 %
Terminates networks	Count	0.00	1.00	1.00
	Row%	0.00 %	100.00 %	100.00 %
Conversationally terminates and terminates networks	Count	0.00	1.00	1.00
	Row%	0.00 %	100.00 %	100.00 %
Total	Count	148.00	97.00	245.00

$\chi^2 (5, N = 245) = 205.48, p < .001$, Cramer's $V = .92$

There was a significant difference in how frequently offensive and defensive wingpeople reported using relationship-termination tactics as they enacted their roles ($\chi^2 (5, N = 245) = 205.48, p < .001$, Cramer's $V = .92$, Table 4.7). Defensive wingpeople most frequently reported helping their pilots terminate a relationship with an undesirable other

by using physical tactics (n = 36), conversational tactics (n = 37) and by combining physical and conversational tactics (n = 15). In contrast, not one offensive wingperson (n = 145) reported using any relationship-termination tactics to perform their duties as offensive wingpeople.

Finally, there was no difference in how frequently offensive and defensive wingpeople reported using coaching tactics (χ^2 (1, N = 246) = 1.34, p = .25, Table 4.8). Again, this author suspects that offensive and defensive wingpeople reported using coaching tactics with the same frequency because so few wingpeople reported coaching their pilots (n = 2), with power ranging 0.68-0.99 for small-medium effect sizes at N = 245. Taken together, these findings suggest that offensive and defensive wingpeople use relationship-initiation and -termination tactics differentially and in line with the theorizing presented in the prior section.

Table 4.8

Coaching Tactics by Type of Wingperson

		Type of Wingperson		
Coaching Tactics		Offensive	Defensive	Total
None in this category	Count	146.00	98.00	244.00
	Row %	59.84 %	40.16 %	100.00 %
Conversationally	Count	2.00	0.00	2.00
	Row %	100.00 %	0.00 %	100.00 %
Total	Count	148.00	98.00	246.00

χ^2 (1, N = 246) = 1.34, p = .25

Additionally, the wingpeople in this study did not seem to be involved in all

stages of a romantic relationship. Rather, they seem only to facilitate pilots and targets getting together and separating. An inspection of participants' responses suggests that the wingpeople in this study spontaneously reported relationships of a variety of lengths. Some reported helping their pilots initiate or terminate an hours-long relationship while others reported helping their pilots romantically pursue targets the pilots had known for months. As a result, we must conclude that wingpeople did not help their pilots maintain relationships or coach their pilots because there was insufficient time or opportunities to do so or because a different kind of helper is required when people want help maintaining romantic relationships. Furthermore, participants' instructions left open the possibility for them to report about instances in which they had helped a pilot maintain a relationship or coached a pilot in how to use conversation, physical proximity, and networks to initiate, maintain or terminate a relationship.. Future research should determine whether pilots do not need wingpeople to help them maintain relationships or to coach them in these tactics (although such formal wingpeople as trained and licensed couples' therapists and such informal wingpeople as a table full of long-married and well-meaning aunts might disagree) or whether wingpeople are involved in these processes but do not recognize their contributions as such.

Wingpeople's Termination Decisions

Participants' responses indicated significant differences in how frequently offensive and defensive wingpeople reported the reasons underlying their decisions about when to stop helping their pilots ($\chi 2$ (6, $N = 244$) = 94.32, $p < .001$, Cramer's V = .62, Table 4.9).

Table 4.9

When Wingpeople Stop Helping Pilots by Type of Wingperson

When Wingpeople Stop Helping Pilots		Type of Wingperson		
		Offensive	Defensive	Total
None in this category	Count	5.00	2.00	7.00
	Row%	71.43 %	28.57 %	100.00 %
When the pilot's objective has been achieved	Count	52.00	93.00	145.00
	Row%	35.86 %	64.14 %	100.00 %
When the pilot is satisfied	Count	15.00	1.00	16.00
	Row%	93.75 %	6.25 %	100.00 %
Before the objective is achieved, but with the sense that the pilot can pursue the objective alone	Count	53.00	0.00	53.00
	Row%	100.00 %	0.00 %	100.00 %
Other	Count	2.00	0.00	2.00
	Row%	100.00 %	0.00 %	100.00 %
Before the objective is achieved, but without knowledge of the objective's status	Count	7.00	0.00	7.00
	Row%	100.00 %	0.00 %	100.00 %
Failure	Count	12.00	0.00	12.00
	Row%	100.00 %	0.00 %	100.00 %
The objective was abandoned before completion and the failure	Count	1.00	0.00	1.00
	Row%	100.00 %	0.00 %	100.00 %
Total	Count	147.00	96.00	243.00

χ^2 (7, N = 244) = 94.32, p < .001, Cramer's V = .62

The differences can be seen most clearly by concentrating on offensive wingpeople. Offensive wingpeople used a variety of judgments about the status of their pilot and their pilots' progress toward the goal to know when their help was no longer necessary. Offensive wingpeople most frequently ended their help before their pilots' objective was achieved but with the sense that their pilots would be able to make progress toward the objective on their own ($n = 53$), which was both reported more frequently than expected by chance and more frequently than defensive wingpeople reported that reason ($n = 0$). The second most frequent reason offensive wingpeople reported for ending their help was that the pilot's objective had been achieved ($n = 52$), although this reason was reported less frequently than would be expected by chance (probably because this was mainly a concern of defensive wingpeople). Finally, the third and fourth most frequently reported reasons offensive wingpeople offered for ending their help was that they had the sense their pilot was satisfied even though the objective was not met ($n = 14$) and that they failed their pilot ($n = 12$). In both cases, offensive wingpeople reported these reasons more frequently than would be expected by chance and more frequently than defensive wingpeople reported those reasons ($n = 1$, $n = 0$, respectively). In contrast, defensive wingpeople reported almost exclusively that they stopped pursuing their pilots' objective because the pilot's objective had been achieved ($n = 93$) and not one defensive wingperson ($n = 0$) reported failing to achieve the pilot's objective.

Taken together, these findings suggest that the amount of persistence toward goal pursuit that wingpeople offer depended on whether they provided offensive or defensive help. This observed difference in persistence could be because people acting as defensive wingpeople are recruited specifically because they are thought to be persistent people or

because the qualities they are selected for indirectly yield more persistence. Inspecting participants' responses suggests that a lot of defensive wingmanning happens spontaneously: Participants reported being with friends at bars, parties, gyms, and on campus and being recruited in the moment to be a defensive wingperson and manage a developing interaction. So, it would seem that spontaneity of many defensive wingmanning instances would work against the idea that people who are persistent or who have qualities that indirectly encourage persistence are specifically recruited to be defensive wingpeople — there simply isn't sufficient time for pilots to plan or execute such a strategy.

A second reason that defensive wingpeople were more persistent than offensive wingpeople is that there may be a difference in the quality of wingmanning episodes that calls forth the need for an offensive or defensive wingperson, and that this distinct quality generates more persistence in defensive wingpeople. Upon inspecting participants' responses, it seems that defensive wingpeople more than offensive wingpeople perceived a larger or more serious threat to their pilot's safety and wellbeing if they fail to terminate an incipient relationship. For example, one defensive wingperson wrote, "The person who identified me [to be her defensive wingperson] wanted me to be a defensive wingperson because they felt uncomfortable. I agreed to be a defensive wingperson because I . . . don't want harm or unpleasant situations to come to them." Another defensive wingperson wrote, "My primary duty is to help get my friend out of the situation that she does not want to be in. Most of us don't like dancing with strangers so if the stranger seems really creepy and it is obvious that my friend does not want to dance with them, I have to try and figure out a way to separate my friend from the stranger. The undesirable other usually responds with either a bit of disappointment, anger, annoyance, or being upset." A third

defensive wingperson wrote, "My friend told me a creepy person wouldn't leave her alone at a party so I told her I would help her get rid of him. . . . She couldn't get rid of the person herself and . . . my duty was to get my friend home safe and away from the guy. The undesirable kept trying to follow us home. My job was over once I got my friend home safe without the guy. The outcome was that my friend was safe." These responses reveal that defensive wingpeople and their pilots perceived very real threats to wingpeople's and pilots' comfort and safety during the interaction at an initial location and, as evidenced by the third quotation, potentially after the defensive wingperson and pilot physically separate themselves from the target by leaving the initial location. Thus, it seems to be critical that defensive wingpeople achieve the goal of repelling the target because failure means risking their pilots' safety and their own. Indeed, the findings reported above about who made targeting decisions supports this second idea. Defensive wingpeople reported more frequent collaboration with pilots on targeting decisions and seemed to have more freedom to make the targeting decisions without first consulting the pilot. Defensive wingpeople may have this freedom because third parties can observe interactions and may notice warning signs that their pilot, who is involved in the interaction, may not.

Finally, participants' responses indicated significant differences in how frequently offensive and defensive wingpeople reported the type of social support they offered their pilots (χ^2 (9, N = 225) = 19.42, p = .02, Cramer's V = .29, Table 4.10). This analysis reveals that the primary type of social support both offensive and defensive wingpeople provided was tangible social support (n = 88 and n = 73, respectively). However, offensive wingpeople provided that tangible support less frequently than would be expected by

chance, whereas defensive wingpeople provided that tangible social support more frequently than would be expected by chance. Additionally, very few wingpeople (n = 9) did not report providing any type of social support to their pilots.

In sum, these analyses displayed important differences, often at very substantial effect sizes, between offensive and defensive wingperson roles.

Table 4.10

Social Support Provided by Type of Wingperson

Type of Social Support Helpers Reported Providing		Type of Wingperson		
		Offensive	Defensive	Total
None in this category	Count	5.00	4.00	9.00
	Row%	55.56 %	44.44 %	100.00 %
Information support	Count	8.00	2.00	10.00
	Row%	80.00 %	20.00 %	100.00 %
Emotion support	Count	3.00	3.00	6.00
	Row%	50.00 %	50.00 %	100.00 %
Information and emotion support	Count	1.00	0.00	1.00
	Row%	100.00 %	0.00 %	100.00 %
Esteem support	Count	7.00	0.00	7.00
	Row%	100.00 %	0.00 %	100.00 %
Network support	Count	5.00	0.00	5.00
	Row%	100.00 %	0.00 %	100.00 %
Tangible support	Count	87.00	72.00	159.00
	Row%	54.72 %	45.28 %	100.00 %
Information and tangible support	Count	3.00	1.00	4.00
	Row%	75.00 %	25.00 %	100.00 %
Esteem and tangible support	Count	1.00	0.00	1.00
	Row%	100.00 %	0.00 %	100.00 %
Network and tangible support	Count	18.00	3.00	21.00
	Row%	85.71 %	14.29 %	100.00 %
Total	Count	139.00	86.00	225.00

$\chi^2\,(9, N = 225) = 19.42, p = .02$, Cramer's $V = .29$

Sex Differences in Wingmanning

The prior chapter explored reasons to expect sex differences in wingmanning. For example, Ackerman and Kenrick's (2009) first and third experiments investigated whether heterosexual men and women offer and receive differential sex-based wingmanning in courtship situations. Specifically, Ackerman and Kenrick found that men and women flexibly provided their friends offensive or defensive wingmanning based on the kind of assistance they thought their friend wanted. Crucially, participants in those experiments (in some experiments, participants were directed to imagine a pilot) *presumed* their female friends wanted help avoiding another's romantic overtures whereas they *presumed* their male friends wanted help securing a desired other. Moreover, female participants reported receiving more avoidance assistance from women than from men, and male participants reported receiving more attraction assistance from men than from women. Because there is some evidence that wingmanning might be a process that is done differently based on the pilot's sex, the analyses in this section will describe the sex differences, if any, observed in the data collected for this study. In fact, five significant sex differences emerged from the eleven tests conducted.

The first sex difference concerns whether wingpeople reported assisting pilots who were the same sex as the wingpeople as frequently as they reported assisting pilots who were not the same sex. Wingpeople in this study reported helping pilots differentially based on their sex (χ^2 (1, N = 223) = 147.11, p < .001, Cramer's V = .81, Table 4.11). Male and female wingpeople overwhelmingly reported helping same-sex pilots (n = 71 and n = 132, respectively) and at rates that were greater than would be expected by chance. Although both male and female wingpeople in this study reported helping pilots

of the opposite sex (n = 16 and n = 4, respectively), they did so less frequently than would be expected by chance. Because ϕ = .81, we may conclude that there is a large correlation between wingpeople's sex and the sex of their pilots.

Table 4.11

Pilot's Sex by Wingperson's Sex

		Wingperson's Sex		
Pilot's Sex		Male	Female	Total
Male	Count	71.00	16.00	87.00
	Row%	81.61 %	18.39 %	100.00 %
Female	Count	4.00	132.00	136.00
	Row%	2.94 %	97.06 %	100.00 %
Total	Count	75.00	148.00	223.00

χ^2 (1, N = 223) = 147.11, p < .001, Cramer's V = .81

Thus, further discussions of sex differences and similarities in these data must proceed under the observation that the men in this study tended to help other men and that the women in this study tended to help other women. Ackerman and Kenrick (2009) explained this differential, sex-based help by offering a inclusion-based line of reasoning: Men would be better suited to provide offensive help because they had more experience than women in pursuing their own offensive courtship goals and that women would be better suited to provide defensive help because they were more experienced in pursuing their own defensive goals. However, Ackerman and Kenrick failed to offer consider an exclusion-based line of reasoning that is pertinent to the courtship domain. Straight men

who want to satisfy their offensive courtship goals can do so by pursuing their heterosexual female friends instead of asking those female friends to be wingpeople. Women who want to avoid unwanted romantic advances can do so by avoiding asking their heterosexual male friends for help. So, although this study replicates Ackerman and Kenrick's (2009) finding that most courtship wingmanning involves wingpeople and pilots of the same sex, it does not illuminate the reasoning that people use when selecting their same-sex wingpeople.

Table 4.12

Wingperson's Sex by Type of Wingperson

		Type of Wingperson		
Pilot's Sex		Offensive	Defensive	Total
Male	Count	56.00	19.00	75.00
	Row%	74.67 %	25.33 %	100.00 %
Female	Count	80.00	68.00	148.00
	Row%	54.05 %	45.95 %	100.00 %
Total	Count	136.00	87.00	223.00

χ^2 (1, N = 223) = 8.89, p < .001, Cramer's V = .20

The second sex difference described also speaks to Ackerman and Kenrick's (2009) argument. In this study, there was a difference in how frequently male and female wingpeople reported engaging in offensive and defensive wingmanning (χ^2 (1, N = 223) = 8.89, p < .001, Cramer's V = .20, Table 4.12). Specifically, male wingpeople provided offensive help more frequently than expected (n = 56) and defensive help less frequently than expected (n = 19). The reverse was true for female wingpeople, who provided defensive help more frequently than expected (n = 68) and offensive help less frequently than

expected ($n = 80$). However, this analysis alone is not enough to illuminate whether people tend to choose same-sex wingpeople to help them pursue courtship goals because a same-sex wingperson has experience pursuing similar goals, so another layer — the pilot's sex — was added to the analysis. This addition clarified the sex difference. When pursuing offensive goals, male wingpeople helped 56 male pilots and 0 female pilots ($\chi^2 (1, N = 136) = 92.44, p < .001$, Cramer's $V = .82$). When pursuing defensive goals, female wingpeople helped 65 female pilots and 3 male pilots ($\chi^2 (1, N = 87) = 50.28, p < .001$, Cramer's $V = .76$). Taken together, these data further suggest that observed sex differences in courtship wingmanning were responsive to the type of help that wingpeople presume their pilots to need, and, further, that that type of help was associated with the pilot's sex. Additional research is necessary to determine whether pilots seek help differentially and whether pilots think the help they receive is effective. The third sex difference observed concerns the goals wingpeople in this study reported pursuing ($\chi^2 (10, N = 222) = 25.11, p = .005$, Cramer's $V = .34$, Table 4.13). Although both male and female wingpeople reported helping their pilots attract a desirable other ($n = 51$ and $n = 74$, respectively), more female wingpeople reported helping their friends repel an undesirable other ($n = 55$) than did male wingpeople ($n = 10$). This sex difference partially aligns with the sex difference in help provision that Ackerman and Kenrick (2009) found. Specifically, although female wingpeople did provide more defensive help to their female pilots than male wingpeople provided to their male pilots, most male and female wingpeople in this study reported attempting to help their pilots attract a desirable other.

Table 4.13

Goals by Wingpeople's Sex

Goals		Wingperson's Sex		
		Male	Female	Total
Attract a target	Count	51.00	74.00	125.00
	Row%	40.80 %	59.20 %	100.00 %
Repel a target	Count	10.00	55.00	65.00
	Row%	15.38 %	84.62 %	100.00 %
Engage and neutralize a target's wingperson	Count	1.00	1.00	2.00
	Row%	50.00 %	50.00 %	100.00 %
Attract a target and engage and neutralize a target's wingperson	Count	3.00	2.00	5.00
	Row%	60.00 %	40.00 %	100.00 %
Leave no pilot behind	Count	1.00	0.00	1.00
	Row%	100.00 %	0.00 %	100.00 %
Isolate a target	Count	0.00	1.00	1.00
	Row%	0.00 %	100.00 %	100.00 %
Attract a target and isolate a target	Count	1.00	1.00	2.00
	Row%	50.00 %	50.00 %	100.00 %
Repel a target and isolate a target	Count	6.00	3.00	9.00
	Row%	66.67 %	33.33 %	100.00 %
Attract a target and leave no pilot behind	Count	0.00	1.00	1.00
	Row%	0.00 %	100.00 %	100.00 %

Table 4.13

Goals by Wingpeople's Sex

Goals		Wingperson's Sex		
		Male	Female	Total
Isolate a target and leave no pilot behind	Count	0.00	1.00	1.00
	Row%	0.00 %	100.00 %	100.00 %
Total	Count	74.00	148.00	222.00

χ^2 (10, N = 222) = 25.11, p = .005, Cramer's V = .34

The fourth sex difference observed in this study was of the willing-subordination tactics male and female wingpeople used to achieve the outcomes their pilots desired. The overall statistics indicate a sex difference (χ^2 (7, N = 219) = 25.48, p < .001, Cramer's V = .34, Table 4.14). That difference seems to primarily be the result of female pilots (n = 50) more than male pilots (n = 7) reporting actively making their pilot unattractive to an undesirable other. More male pilots (n = 30) reported actively working to increase the pilot's attractiveness than would be expected by chance alone, whereas fewer female pilots (n = 41) reported working to increase the pilot's attractiveness than would be expected by chance alone.

Table 4.14

Willing-Subordination Tactics by Wingpeople's Sex

Willing-Subordination Tactics		Wingperson's Sex		
		Male	Female	Total
None in this category	Count	13.00	26.00	39.00
	Row%	33.33 %	66.67 %	100.00 %
Increases the pilot's attractiveness to the target	Count	30.00	41.00	71.00
	Row%	42.25 %	57.75 %	100.00 %
Increases the pilot's attractiveness and decreases own attractiveness to below the pilot's attractiveness	Count	2.00	0.00	2.00
	Row%	100.00 %	0.00 %	100.00 %
Actively makes self unattractive	Count	0.00	2.00	2.00
	Row%	0.00 %	100.00 %	100.00 %
Actively makes pilot unattractive	Count	7.00	50.00	57.00
	Row%	12.28 %	87.72 %	100.00 %
Does not romantically pursue the target	Count	4.00	9.00	13.00
	Row%	30.77 %	69.23 %	100.00 %
Increases the pilot's attractiveness and does not romantically pursue the target	Count	13.00	9.00	22.00
	Row%	59.09 %	40.91 %	100.00 %
Other	Count	5.00	8.00	13.00
	Row%	38.46 %	61.54 %	100.00 %
Total	Count	74.00	145.00	219.00

$\chi^2\ (7, N = 219) = 25.48, p < .001$, Cramer's $V = .34$

The fifth and final sex difference observed in this study concerns the frequency with which pilots reported using tactics to terminate contact between their pilots and an undesirable other. These results are similar to those found when comparing the willing-

subordination tactics of male and female pilots, (χ^2 (5, N = 223) = 15.11, p = .010, Cramer's V = .26, Table 4.15). Specifically, more female wingpeople (n = 56) than male wingpeople (n = 18) reported using relationship-termination tactics, and female wingpeople reported using relationship-termination tactics more frequently than would be expected by chance alone, whereas male wingpeople reported using relationship-termination tactics less frequently than would be expected by chance alone. Additionally, male wingpeople reported not using any relationship-termination tactics more frequently than would be expected by chance alone where as female wingpeople reported not using any relationship-termination tactics less frequently than would be expected by chance alone.

Table 4.15

Relationship-Termination Tactics by Wingpeople's Sex

Relationship-Termination Tactics		Wingperson's Sex		
		Male	Female	Total
None in this category	Count	57.00	82.00	139.00
	Row%	41.01 %	58.99 %	100.00 %
Physically terminates	Count	4.00	28.00	32.00
	Row%	12.50 %	87.50 %	100.00 %
Conversationally terminates	Count	11.00	24.00	35.00
	Row%	31.43 %	68.57 %	100.00 %
Physically terminates and conversationally terminates	Count	2.00	13.00	15.00
	Row%	13.33 %	86.67 %	100.00 %
Terminates networks	Count	0.00	1.00	1.00
	Row%	0.00 %	100.00 %	100.00 %
Conversationally terminates and terminates networks	Count	1.00	0.00	1.00
	Row%	100.00 %	0.00 %	100.00 %
Total	Count	75.00	148.00	223.00

χ^2 (5, N = 223) = 15.11, p = .010, Cramer's V = .26

Six tests indicated that the male and female wingpeople in this sample reported using similar tactics while helping their pilots attract desirable targets and avoid undesirable targets. First, male and female wingpeople reported acting from personal, dyadic, and/or communal motivations at the same rate, χ^2 (6, N = 222) = 10.03, p = .124. As indi-

cated earlier, the power to detect small effects at this sample size is 0.68 and the power to detect moderate effects is 0.99. Most male wingpeople reported acting from personal motivations ($n = 31$), whereas most female wingpeople reported acting from communal motivations ($n = 61$). Next, male and female wingpeople reported no difference in how frequently they used relationship-initiation tactics, χ^2 (5, $N = 222$) = 9.97, $p = .076$, or relationship-maintenance tactics, χ^2 (4, $N = 223$) = 2.48, $p = .648$. Both male and female wingpeople reported using conversation to initiate ($n = 45$ and $n = 59$, respectively) and maintain ($n = 4$ and $n = 8$, respectively) contact between their pilots and a desired other. It should be noted that most male ($n = 69$) and female ($n = 137$) wingpeople reported not using conversation, proximity, or network tactics to help their pilots maintain an interaction with a desired target. Fourth, male and female wingpeople reported providing similar types of social supports to their pilots at similar rates, χ^2 (10, $N = 204$) = 7.43, $p = .684$. Specifically, tangible support was the type of social support male ($n = 51$) and female ($n = 92$) wingpeople reported providing their pilots most frequently. Few male ($n = 3$) and female ($n = 7$) wingpeople reported providing information support to their pilots, emotion support ($n = 1$ and $n = 5$, respectively), or no social support at all $n = 1$ and $n = 6$, respectively). Fifth, male and female wingpeople reported similar rates at which they and/or their pilots made targeting decisions, χ^2 (8, $N = 222$) = 11.88, $p = .157$. Specifically, most male ($n = 42$) and female ($n = 71$) wingpeople reported that their pilots identified the target. Many male ($n = 20$) and female ($n = 36$) wingpeople reported that they themselves identified a target for their pilots. Nine female pilots reported that their pilot was targeted, whereas only one male wingperson reported that his pilot was targeted. Finally, male and female wingpeople also reported similar frequencies of when they removed themselves

from the pilot-target interaction, χ^2 (8, N = 222) = 12.68, p = .132. Most male (n = 35) and female (n = 97) wingpeople reported that they stopped helping their pilot once their pilot's objective was achieved. Few male (n = 4) and female (n = 7) wingpeople reported that they failed to achieve their pilot's objective.

Discussion

Study 1 provided information sufficient to evaluate Hypothesis 9 and to address Research Question 3. In addition, analyses displayed several other points of interest.

Hypothesis 9: Wingpeople's Motivations

One foundational question motivated this study: Why, when romantic wingmanning can be so costly, do people do it? Costs associated with being an offensive romantic wingperson include, by definition, exerting effort to secure a potential mate for someone else. Costs associated with being a defensive wingperson include, again, by definition, protecting another person from an undesirable other, often by joining that person in a situation where a threat is present. As a result of identifying these costs and others, this author assumed that wingpeople would have different motivations for performing the wingperson role.

Hypothesis 9, which put forth the notion that the personal, dyadic, and communal motivations would account for nearly all motivations wingpeople reported, was supported. More than 99 percent of wingpeople reported acting from at least one of these motivations, and both offensive and defensive wingpeople reported acting from each motivation. The data analysis pointed to several additional points that clarify wingpeople's motivations. The first is that offensive wingpeople reported acting most frequently from person-

al motivations, whereas defensive wingpeople reported acting most frequently from communal motivations. This piece of data is one of many that reinforce the conceptual distinction between offensive and defensive wingmanning and that suggest that offensive and defensive wingpeople perform different roles for different reasons. This point will be reinforced and elaborated below during the discussion of wingpeople's tactics.

A second finding extends the wingmanning motivations hypothesis and Clark, Mills, and colleagues theory of communal and exchange relationships (Clark, 1981, 1984; Clark & Mills, 1993). Specifically, 31 participants (12.8% of the Study 1 sample) reported acting from more than one motivation. Neither Clark, Mills, nor I had suggested that participants could act from more than one motivation at a time, although that possibility was also not explicitly discounted by any of us. These data showed that some participants perceived a more complex relational accounting system than previously reported, one in which it is simultaneously possible to act to repay a debt as well as to satisfy the desire to see a friend safe. This second point also reinforces how imperative it is to allow participants the option of reporting the full range of behaviors (or cognitions, or emotions) instead of researchers truncating these possibilities for participants. When researchers foreshorten participants's opportunities to report the full and nuanced range of their lived experiences, the quality of the resulting science suffers.

Research Question 3: Protecting Pilots' Wellbeing

There was also sufficient data to address Research Question 3, which sought more insight into Hypothesis 9 by calling for an investigation into what aspects of pilots' well-being offensive and defensive wingpeople attend to. Quantitative results indicated that

both offensive and defensive romantic wingpeople attend to their pilots' wellbeing. However, a review of wingpeople's responses to open-ended questions indicates that offensive and defensive romantic wingpeople attended to different aspects of their pilots' wellbeing. Some sample extracts illustrate these differences.

> Participant 83, an 18-year-old male offensive wingperson who reported having been only an offensive wingperson to a male pilot, said, "The reason I acted as a wingman is because it was a very close friend and I was willing to assist them because I cared about them."
>
> Participant 88, a 21-year-old female offensive wingperson who reported having been an offensive and defensive wingperson for female pilots, said, "She's my best friend and we were at the bar together. I agreed because I would do anything for her! She recently broke up with a boyfriend and is having a hard time/looking for a distraction."
>
> Participant 160, a 21-year-old male offensive wingperson who reported having been only an offensive wingperson for a male pilot, said, "I agree because he is my friend and I want him to be happy."
>
> Participant 279, a 21-year-old female offensive wingperson who reported having been only an offensive wingperson for a female pilot, said, "I agreed to be a wingman because I want my friends to be happy."
>
> Participant 4, a 20-year-old female defensive wingperson who reported being both an offensive and defensive wingperson to female pilots, said, "I agree to be a wingman because I don't want [the pilot] to feel uncomfortable and not have a

good time. . . . My primary goal was to get my friend out of that situation and make sure they found a better place to be."

Participant 81, a 19-year-old male defensive wingperson who reported having been only a defensive wingperson to a male pilot, said, "My primary duties are to keep the buddy away from undesirable people and make sure nothing happens to him like tripping that would make him look dumb."

Participant 152, a 19-year-old male defensive wingperson who reported having been only a defensive wingperson to a male pilot, said, "At Senior Week, I had to save my friend from his ex-girlfriend because she wanted to have sex with him but he was in a committed relationship with another girl. I saw that he was about to make a stupid decision . . . so I acted because I knew deep down he didn't want to cheat on his current girlfriend. . . . Once [the wingmanning was complete], he thanked me endlessly."

Participant 159, an 18-year-old female defensive wingperson who reported having been only a defensive wingperson to a female pilot, said, "I was at a party when this happened. At the time I grabbed my friend and danced with her in order to encourage the guy pursuing her to leave. When he didn't leave I told her she should come with me to get a drink and we left him. My duties were to make sure she was safe and that she didn't feel uncomfortable being pursued by a man she wasn't interested in. . . . I knew my abilities were no longer needed when my friend was not near the guy anymore and I felt she was safe."

Participant 230, a 20-year-old female defensive wingperson who reported having

been only a defensive wingperson to a female pilot, said, "Because they felt uncomfortable, I agreed to be a wingman because I am always there for my friends and don't want harm or unpleasant situations to come to them."

This pattern of participant responses, which is typical of the data set, indicates that offensive wingpeople tended to focus on their pilot's happiness whereas defensive wingpeople tended to focus on decreasing their pilot's immediate and longer-term discomfort and fear and protecting them from unforeseen and/or unforeseeable danger, thus increasing pilots' feelings of physical and relational safety.

The idea that offensive and defensive wingpeople attend to different aspects of their pilot's wellbeing was supported by the different frequencies with which offensive and defensive wingpeople reported making decisions about when to stop helping their pilots. Most offensive pilots said they stopped their wingmanning duties when the pilot's offensive objective was achieved (n = 47) or before they had confirmation the objective was achieved but with the sense that the pilot could or would achieve the objective him- or herself (n = 48); a few offensive pilots reported entirely failing to achieve the objective (n = 11). By contrast, most defensive wingpeople stopped their wingmanning duties when the pilot's defensive objective was achieved (n = 60) or when they achieved the defensive objective but still continued to be near their pilots to make sure that the undesirable other would not present a recurring problem for their pilot (n = 11). Not one defensive wingperson reported failure.

Taken together, these data suggest that the stakes of defensive wingmanning are higher than those for offensive wingmanning: If offensive wingpeople fail to achieve part

or all of their objective, their pilot misses out on one of many possibilities to be happy. But, if defensive wingpeople fail to achieve part or all of their objective their pilot could experience momentary and/or lasting psychological, emotional, or physical harm.

Given this analysis and the finding that male wingpeople tended to provide help to male pilots most frequently and that female wingpeople tended to help female pilots most frequently, the results from this study accord with and extend error management theory (EMT) applied to the evolutionary courtship domain (Haselton & Buss, 2000). There are two important assumptions of error management theory. The first assumption is that when decisions are made under uncertainty, two types of errors may result: a false positive (something is thought to occur when it in fact does not) and a false negative (something is thought not to occur when it in fact does). The second assumption is that the costs and benefits of each type of error are asymmetrically distributed. Haselton and Buss (p. 82) summarize the main argument of error management theory as it applies to evolution and selection: "The key point of EMT is that selection will favor biased decision rules that produce more beneficial or less costly outcomes (relative to alternative decision rules), even if those biased rules produce more frequent errors."

Applying error management theory to wingmanning in the courtship domain offers insight into when wingpeople decide to stop helping their pilots. First, with respect to defensive wingpeople, the costlier judgment error is to underestimate the amount of discomfort their pilot experiences and/or to underestimate the size of the threat the undesirable other poses. Thus, we see defensive wingpeople reporting no failed objectives, more completed objectives than offensive wingpeople, and objectives completed more fre-

quently than would be expected by chance alone (whereas offensive wingpeople report completing objectives less frequently than would be expected by chance alone). Second, with respect to offensive wingpeople, the costlier judgment error is to overestimate the length and type of their involvement in their pilots' initial romantic interactions — overstaying their necessary departure time or being overly interested in the target might indicate romantic interest and suggest betrayal to their pilots. Accordingly, we see offensive wingpeople reporting stopping decisions that remove them from the interaction before the objective is achieved more frequently (by count and compared to chance alone) than they report achieving the objective. Additional support comes from the finding that offensive wingpeople in this sample reported failing to reach their pursuer's objective, which indicates that although failure is costly, offensive wingpeople perceive failure as less costly than overstaying their welcome in their pilots' initial romantic interactions. Finally, because there was no observed sex difference in how frequently male and female wingpeople reported making stopping decisions, we may understand wingpeople's decisions to minimize error costs as a pattern that is tied to the roles of offensive and defensive wingmanning and not of as a pattern that is tied to sex difference in wingpeople or their pilots. Consequently, error management theory is a useful lens through which to understand offensive and defensive wingpeople's decision-making in the courtship domain, a domain in which communication and behavioral differences are usually driven by the different biological capacities of the sexes (e.g., Abbey, 1982; Ackerman & Kenrick, 2009; Schmitt, 2004; Stone, Shackelford, & Buss, 2007). Unlike Haselton and Buss (2000), this study found that the goals drove wingpeople's decisions about when to stop helping their

pilots and not theirs, their pilot's, or the target's sex.

Validation of Basic Constructs

We should take note that several of the empirical results from this study clearly validated several conceptual points made in the prior chapter. Constructs often have two natures, one theoretical and one empirical. A theoretical distinction, for example, the difference between persuasion and coercion, can be very sharp in conceptual terms, but might become confused when ordinary actors are asked to use the distinction. Likewise, an ordinary person might make an empirical distinction, for example the difference between arguing and discussing, that argumentation researchers may not. The conceptual definitions offered in Chapter 1 were offered on theoretical grounds. Here, however, this study offers evidence that ordinary actors are also sensitive to many of those distinctions.

Several of examples of theoretical differences that ordinary people also appear to make emerged from this study. The foundational distinction was the difference between offensive and defensive wingmanning. Effect sizes in this study for tests involving distinctions between offensive and defensive wingpeople ranged from Cramer's $V = 0.62$ to 0.98, and the Cramer's V of 0.62 was the smallest effect size by approximately 20 points; recall that Cramer's V is considered to be a strong effect at values greater than or equal to .60. People in this study seemed to communicate and behave in consistently patterned ways when they were offensive and defensive wingpeople. For example, not one offensive wingperson reported that repelling a target was a desired outcome of the interaction. Not one defensive wingperson reported failing to keep an undesirable target away from their pilots, nor did any report terminating their wingmanning duties before before know-

ing whether the pilot's objective was achieved. Another important set of findings is that offensive and defensive romantic wingpeople pursued different goals, but used the same communication-based relationship-management tactics to do so. Specifically, they used the same relationship-initiation and relationship-termination tactics. The reason that offensive and defensive romantic wingpeople appear to use the same relationship-maintenance tactics appears to be because neither group reported helping to maintain initial interactions much at all. Offensive wingpeople mostly reported helping initiate relationships and defensive wingpeople mostly reported helping to terminate relationships, which is a difference in line with the conceptual distinction. However, both types of wingpeople mainly used communication to do so, which reinforces the idea that communication is central to wingmanning.

While theoretical distinctions can still be defended even if ordinary actors fail to make them, constructs can be regarded as having additional validity when they emerge from the thinking of both theorists and typical actors. Such theories can be interrogated in both the conceptual and empirical domains. When the constructs survive both sorts of testing, as several of the wingperson distinctions appear to have done, their utility and value are heightened.

Social Support

As discussed earlier, there are some findings related to social support that deserve attention. Because this was the first study that investigated wingpeople, one important question to investigate was what social support, if any, wingpeople reported providing to their pilots. The social-support coding scheme followed Goldsmith's (2004) work on so-

cial support, and coders reviewed participants' responses for information support, emotion support, esteem support, network support, tangible support and combinations thereof. In less than 3.5% of responses (n =8) could coders not discern wingpeople reporting any type of social support at all. This finding means that nearly all of the wingpeople reported using at least one type of social support. Moreover, nearly a quarter of all instances of social support involved wingpeople providing more than one type of social support to their pilots. From these findings, we see that wingpeople are doing what this study assumed: They provided social support to their pilots. Otherwise, if wingpeople did not provide social support to their pilots, what help would they be to their pilots?

The type of social support wingpeople provided to their pilots also bears discussion. Both offensive and defensive romantic wingpeople overwhelmingly reported providing tangible support or a combination of tangible support and other types of support to their pilots. Both offensive and defensive wingpeople reported providing very few instances of information, emotion, esteem, and network support, either alone or in combination. When these findings and the relationship-management findings are considered together, it becomes clear that wingpeople use communication to provide tangible support to their wingpeople. Very few coached their wingpeople and provided information or network support. The following responses, typical of the data, show how wingpeople use communication to provide tangible support:

> Participant 121, a 19-year-old male offensive wingperson who reported having been only an offensive wingperson to a male pilot, said, "My friend . . . identified a person of interest. The conversation's purpose was to help introduce a friend

and his [person of] interest. I just asked the girl basic introductory questions ("Hey, I'm ____. How's your night so far?" . . . "Hey, I have a friend, ____, who's interested in you and is so annoying with gushing about you.").

Participant 216, a 20-year-old female offensive wingperson who reported having been only an offensive wingperson to a female pilot, said, "My friend was too scared to speak to the guy [she was interested in] so I did it for her. I initiated the conversation in the Stamp Student Union on campus. My goal was to get his attention on my friend. I made witty jokes but kept quiet when they were talking to one another."

Participant 312, a 20-year-old female offensive wingperson who reported having been both an offensive and defensive wingperson to female pilots, said, "My friend asked me to be her wingman because she was too shy to talk to the guy she liked. I went up tot he guy and made a joke. He laughed, then I told him about my friend. He looked at her and seemed interested so I talked her up. I told him we he should go over and talk to my friend. He did and they started dancing together."

Participant 127, an 18-year-old male defensive wingperson who reported having been only a defensive wingperson to a male pilot, said, "Once I got the go-ahead to distract her, I made conversation and held her away from my friend as much as possible. I kept her busy for long enough until my friend was able to leave the room or area, escaping the undesirable. When I saw her get close to him, I intervened again and distracted her with conversation. Also, I kept my friend posted

about on her whereabouts when I had information so he knew where to avoid."

Participant 230, a 20-year-old female defensive wingperson who reported having been only a defensive wingperson to a female pilot, said, "Before going out, my friends and I will sometimes have a certain signal/something we say for the other to know they need help. . . . As soon as I noticed [the signal], I walked over, joined with what they were talking about for a little to not make it awkward, and looked at my phone and said we have to go because someone else is looking for us."

Participant 313, a 20-year-old female defensive wingperson who reported having been only a defensive wingperson to a female pilot said, "My friends and I stick together because it is difficult for one to pull them away from someone undesirable. I basically interfered with the conversation and started talking about our boyfriends. My primary duty was to set my friend free . . . [The target] continued to be pushy, however after being aggressive, they left us alone."

As these respondents make clear, offensive romantic wingpeople provide the unique tangible support of using communication to provide the tangible support of breaking the ice in initial romantic interactions and defensive romantic wingpeople use communication to provide the tangible support of freezing those initial romantic interactions right back up again.

The findings that have emerged from this study and those that led to it suggest that wingmen play an important in initial romantic interactions. Wingpeople and the need for them might be limited to initial romantic interactions. However, given the strong and

consistent findings that wingpeople are responsive to their pilots' goals for an initial romantic interaction and that they use communication to enact similar patterns of behavior in those romantic interactions, we can see the bundle of goals, plans, and communication tactics bound up in wingmanning moving from what might once have been considered the realm individual problem-solving (Dillard, 1990a, 1990b, 2004; Greene, 1995, 1997, 2007) and approaching what appears to be a more widespread sociological phenomenon, what Abelson might call a script (1981) or what Goffman might part enacted while performing a role. (Goffman, 1959). Indeed, wingpeople in initial romantic interactions may be the prototype for a pattern of communication, behavior, and relationships that make up third-party assistance.

The suggestion that wingpeople in initial romantic interactions are just one social domain's instance of a larger phenomenon might seem a little grand given the evidence this study found. However, the theoretical argument suggesting that "wingperson" might be a role that people perform is supported by the participants themselves. While reading the following extracts from participants in support of this theoretical contention, recall that participants were directed to write only about their experiences wingmanning in initial romantic interactions:

> Participant 127, a 21-year-old offensive wingperson who reported having been both an offensive and a defensive romantic wingperson to only male pilots, said: "A specific example would be a friend looking for a job. We all know that it is common to be able to have a better foot in the door for jobs if you have a contact in the company. I knew of a contact in the company and knew this would be

> a good resource for her. I helped get his name out there and to assist him with the initial interaction. The other was willing to help and humor my request to speak with my friend. I knew I was no longer required when it was his time to speak for himself. I was able to get him to speak with the [company contact].
>
> Participant 348, 29-year-old offensive wingperson who reported having been only an offensive wingperson to a female pilot, said: “My sister was failing in school but she told me she loved learning. I took her to someone who could tutor her so that she could excel at learning. I paid for the tutor every week and still continue to support her learning outside of the classroom. I am eager to see my sister do great. She wants to do great. She is happier with her grades and her feelings about education.”
>
> Participant 160, a 21-year-old male offensive wingperson who reported having been only an offensive wingperson to a male pilot, said,“Being a wingman is like being a travel agent. As a travel agent I learn as much information as I can about a place or destination, I relay that information to my client, but I never get to go there for myself while I am on the clock. As a wingman, I learn as much as I can about a person, I relay that information to my friend, but I never get to explore that person's personality for myself. . . . It is a selfless practice, that is for sure.”

In these extracts, we again see theoretical arguments about wingmanning being supported by empirical evidence. As a result of this concordance and on the strength of the theoretical arguments contained in Chapter 1 and this chapter, I conducted a second study that

investigated whether the wingmanning role and its utility are limited to only the domain of initial romantic interactions.

Chapter 5: A Study Generalizing the Helper Role Across Social Domains

The purpose of the study reported in this chapter is to determine whether the helpers and the goal pursuit they affect occur in domains other than the domain of courtship reported in the first study (Chapter 4), and, if so, how. Specifically, this study was designed to test: Hypotheses 1-3 about helpers' effectiveness, Hypotheses 4-6 about helpers' resources, Hypotheses 7 and 8 about helpers' substitutability, Hypotheses 10 and 11 about helpers' motivations across domains. This study was also designed to investigate Research Question 1 about how helpers' affect pursuers' resources, and Research Questions 3 and 4 about the aspects of pursuers' wellbeing and safety helpers attend to. Participants were asked to describe a recent episode in which they or another person encountered an obstacle to a goal. Participants were asked to respond to measurements of social catalyst constructs (such as obstacle size, motivations, effects on resources, and substitutability), and respond to scales about personality traits, such as general self-esteem (Rosenberg, 1965), need to belong (Leary et al., 2013), and the Big Five inventory of personality dimensions (John & Srivastava, 1999). This chapter will proceed by first describing the method used to obtain the data reported in the Results section. The chapter will conclude with a discussion of the results.

Method

Participants

There were 764 people who provided at least some data for this study; the final sample size for this project was 400. Participants were excluded from these analyses for three reasons. The first reason participants were excluded was because they were not

helpers. As described in more detail below, the instructions for this study invited anyone to participate because collecting data from people who had been helpers, people who had been pursuers, and people who had been neither would permit analysis at a later date of whether the three groups of people were statistically significantly similarly or different on the personality variables described below. As a result, 197 participants were excluded from these analyses because they indicated they had not been or could not recall being helpers in the three months prior to this study. The second reason data from the remaining 567 participants were excluded is that the participant failed at least one of the two attention checks by failing to choose the response the item directed them to choose. The first attention check appeared toward the middle of the questionnaire in the section of the questionnaire that asked participants about how effective they perceived their actions to help pursuers achieve the goal were. The first attention check was: "This purpose of this item is to check whether you are still paying attention. If you are still paying attention, please choose 4." The second attention check appeared toward the end of the questionnaire, just after the Big Five Inventory, and was: "If you are still paying attention, please select 9." As a result, an additional 143 participants were excluded from these analyses because they failed to pass one or both attention checks. (There was also an information check designed to determine whether participants could correctly define *helper*; all remaining participants passed the information check by selecting the correct definition.) The third reason data from the remaining 424 participants were excluded was because they did not provide sufficient data to determine whether they were offensive or defensive helpers. So, to improve data quality, data from the 24 participants who were not able

to be clearly categorized as offensive or defensive helpers was eliminated. As a result of these rules, the final sample size for this study was 400 participants. A pair of *a priori* power analyses (Figure 5.1) indicated that a sample size of 399 participants would be sufficient to achieve traditional social-scientific power levels (i.e., $\beta = .80$) for a multiple regression with 16 predictor variables and if the total multiple linear regression model $R^2 \geq .05$.

Figure 5.1 Study 2 *a Priori* Power Analysis

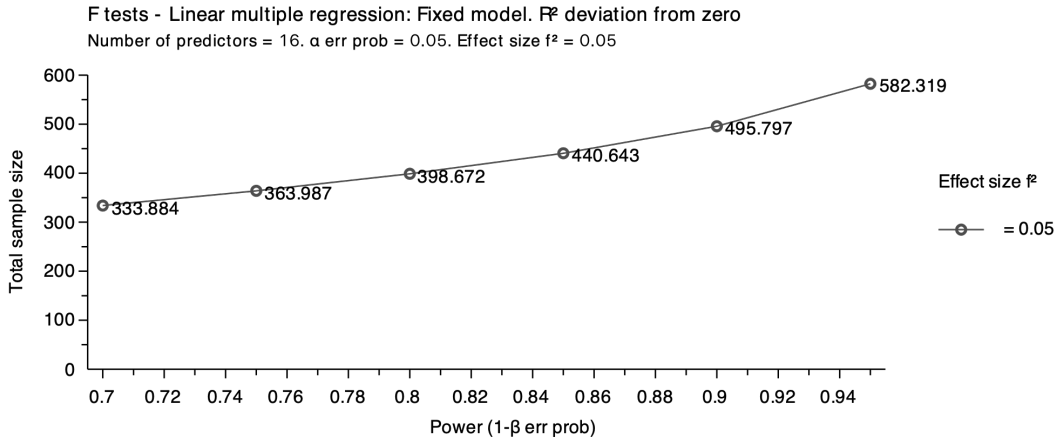

Figure 5.1. An *a priori* sample-size calculation for Study 2 as a function of 16 predictor variables, effect size $f^2 = .05$ and alpha error probability of .05 using G*Power 3.1.9.2 for Mac. G*Power's calculations indicate that a sample greater than 399 participants would be sufficient to detect effects that occur if the total model $R^2 \geq .0526$.

Participants were recruited from undergraduate communication classes at a large mid-Atlantic university and a small midwestern university; additional participants were recruited from the community surrounding the small midwestern university. In exchange for their participation in this study, participants were offered a small amount of extra credit that they could assign to themselves or to a student in a communication class. People were invited to participate in the study if they had reached the age of majority in the

state in which they responded to the questionnaire (18 in the mid-Atlantic state, and 19 in the midwestern state). All participants who provided their informed, voluntary consent read the following instructions:

> People pursue goals, but they aren't always successful. In the face of an initial setback, people can continue trying to reach the goal by themselves, they can ask other people to help them reach the goal, or they can abandon the goal entirely. This is a study about the second group of people – those who ask other people to help them pursue their goals. The goal of this study is to learn more about how people ask for help pursuing goals and how they communicate with the people who agree to help them. For the purposes of this study, pursuer refers to the person who sets the goal, initially fails to reach it, and asks another person for help reaching it, and helper refers to the person who works to help the pursuer achieve his or her goals.

Participants were then asked if they could recall a time they had been a helper in past three months. If they had, they were directed to complete the helper questionnaire. Although more information about the questionnaire and measures will be provided below, understanding the structure of the helper questionnaire is, at this point, important. Helpers were first asked to describe a situation in which they had been a helper. Then they were asked to rate their perceptions, communications, and behaviors during that situation. Next, they were asked to complete personality measures. Finally, they were asked for their demographic information. If people had not been or were not able to recall being helpers, they were asked if they could recall a time they had been a pursuer in the past

three months. If they had, they were directed to complete the pursuer questionnaire. (The pursuer questionnaire mirrored the helper questionnaire in structure and construct, differing only in the item's target and the addition of the Positive and Negative Affect Scale (Watson, Clark, & Tellegen, 1988). For example, this project required items to assess how effective helpers were at closing the distance between the pursuer and the pursuer's goal. Helpers saw the following item: "I was effective." Pursuers saw a mirror version of the same item: "My helper was effective.") If people had not been pursuers or were not able to recall being pursuers in the past three months, they were categorized as having been neither helpers nor pursuers and were directed to a shortened version of the questionnaire that included only personality variables and demographics. Only the helpers' results are reported in this chapter, because they are the only ones relevant to the hypotheses and research questions.

Participants' mean age was 19.50 (SD = 3.03), and, of those participants who reported their own sex, most were women (n = 237, 59.25%). Participants reported that their pursuers were often women (n = 211, 52.75%). Most participants were white (n = 254, 63.50%) and single/not dating anyone (n = 238, 59.50%).

Questionnaire

The questionnaire was designed to obtain information about participants' experiences as helpers. Participants read the instructions reported above and were asked if they could recall a time they had been a helper. If participants indicated they could recall such a time, they were asked to describe, in as much detail as possible, the goal the pursuer asked for their help to reach. Participants were asked this question for two reasons. First,

asking participants to create detailed descriptions of past events makes more of the episode accessible, thus improving the quality of subsequent responses (Schuman & Presser, 1996; Sudman, Bradburn, & Schwarz, 1996). Second, participants' free responses to this question, and to others that will be described later, were combined and formed the unit of analysis that was later coded for whether participants engaged in offensive or defensive helping, the domain of social life in which their helping occurred, what strategies, if any, they used to affect their pursuers' resources, and what aspects, if any, of their pursuers' wellbeing and safety they attended to. The categories and method of coding participants' free responses will be discussed first, followed by a discussion of the scales used to assess the other constructs central to this study.

Coding

The unit of analysis for this study was the participant's entire free-response set. A team of three coders, two of whom were blind to the hypotheses and research questions, independently coded 12.5% (n = 50) of participants' responses for the type of helping that occurred (offensive, defensive, or other), the social domain in which their pursuers were attempting to reach their goals, the strategies helpers used to affect their pursuers' resources, and what aspects of their pursuers' wellbeing and safety helpers attended to. Disagreement was resolved through discussion, and the final codebook was modified to reflect these discussions (the codebook may be found in the Appendix). Each category and its codebook will be discussed in turn.

Coding the Type of Helper. The first category coded for was for what type of helper (offensive or defensive) the participant described being. The categories for type of

helper were sharpened and refined by this author based on the coding rules for offensive and defensive helpers based on arguments earlier in this paper, the codebook that guided Study 1/Chapter 2, and participants' responses in Study 1/Chapter 2 and are repeated here for ease of reference:

> **Offensive**: The participant's response indicated that the participant helped the pursuer move toward a goal that the pursuer wanted to attain. For example, a participant would be considered an offensive wingperson if the participant reported helping the pursuer get the phone number of an attractive classmate, find a good deal on a new laptop, or revise an essay for a scholarship application.
>
> **Defensive.** The participant's response indicated that the participant helped the pursuer avoid something that the pursuer found undesirable. For example, a participant would be considered a defensive wingperson if the participant reported helping the pursuer avoid an unattractive classmate at a party, avoid being scammed by fake antivirus software, or be taken out of consideration for a scholarship.
>
> **Other**. Use this category when a response provides insufficient information to categorize it into one of the wingperson types above.

There were three categories into which a response could be sorted: offensive helper, defensive helper, and other. Twenty-four helpers (5.66%) provided responses that coders considered to provide too little information to categorize as offensive or defensive. The analyses reported below only include data from the 400 helpers (94.34%) who were able to categorized as offensive or defensive helpers. Intercoder agreement for this category

was $\kappa = .91$.

Coders considered participants to be offensive helpers if participants' responses indicated that they helped a pursuer move toward a desirable goal the pursuer wanted to attain. The following examples (excluding romantic pursuit situations that have already been exemplified in Study 1) are extracts from participants' free responses that were considered to be instances of participants helping pursuers move toward a goal the pursuer wanted to attain:

> Participant 266 said, "I tutored a 10-year-old girl who really wanted to get all As in school but greatly struggled with this task. I worked with her for the entirety of last year to help her achieve her goal and we were able to do so. . . . I helped my pursuer by first giving her moral support and constantly reinforcing the idea that she can reach her goal and that the goal was attainable. I then helped make study plans, created new fun games and ways to learn information and study. I then helped make study plans, created new fun games and ways to learn information and study, and went over every piece of homework and test she had."
>
> Participant 561 said, "My goal was to help my cousin Lauryn make the high school tennis team. . . . It was her lifelong dream to wear our school's tennis uniform and I was hopeful I could help her achieve this goal. It took commitment, sacrifice, and determination. She was not as skilled as most girls but had the grit and motivation. She asked me to be her trainer and help prepare her and teach her how to become a great tennis player. . . . I said, 'Lauryn, I achieved this goal, and now you will achieve this goal. You will be Rocky and I will be Apollo Creed

and I will train you and then you can owe me a favor.'"

Participant 665 said, "The person who asked me for help wanted assistance illustrating. They asked for some materials to help them learn, and some first-hand advice from me about drawing. . . . I spent time with them illustrating different prompts and working on techniques and basic skills. I sent the person a fair amount of videos describing tips and strategies to draw in the stye that my friend wanted to draw in. Whenever they sent me a piece that they completed, I would give them honest but positive feedback and moral support to continue."

Coders considered participants to be defensive helpers if participants' responses indicated that they helped a pursuer move away from an undesirable goal the pursuer wanted to avoid. The following examples are extracts from participants' free responses that were considered to be instances of participants helping pursuers move away from goal the pursuer wanted to avoid. Please note that participants' descriptions of being protective, defensive, resistant, and/or avoidant on their pursuers' behalves that was the basis for their categorization as defensive helpers.:

Participant 69 said, "My friend asked me to help him with his goal of moving on from his ex-girlfriend. He was stuck while she had already moved on. . . . I gave him advice. I comforted him. I pushed him to focus on other things. I acknowledged his hurt. I encouraged him about the future. I listened to him. I talked to him. I supported him by staying close to his side if they were ever in the same room."

Participant 70 said, "The goal I was asked to help pursue was to help reorganize

and declutter a home. . . . There were items with negative memories attached and it was important to remove those items but hard for the pursuer to do it on their [own]. . . . I was there with them to start going through the items, allowing them to start the process with my full support so I did not overstep and allowed them to make change while staying in their comfort zone."

Participant 644 said, "[The goal was] to quit nicotine. . . . I told him about the health concerns, I had a conversation with him about how he feels, I talked to him about how addiction is a mind game you have to use mind over matter and he is the only one who will be able to do that. I reminded him of his goals, I tried to distract him from vaping whenever I was with him and show that he doesn't need it. I provided support constantly rather than criticism."

Most participants in this study were offensive helpers (n = 374, 93.5%). Offensive helpers also predominated in the study reported in Chapter 2 (n = 136, 60.98%), but not by nearly as many as in the study reported in this chapter. It is possible that the distinction between attaining and avoiding goals and, therefore, offensive and defensive helpers, is sharpest in the romantic domain and others in which avoidance goals are similarly clearly defined, articulated, and strongly repellant. In other domains, the distinction between moving toward a desired goal and away from a negatively valenced goal may not be so clear. Consider, for example, the academic domain. The helpers in this study may have understood their pursuers' goal of achieving a good grade on an essay as being equivalent to avoiding a bad grade on that same essay. In the mental/emotional health domain, the helpers in this study may have understood their pursuers' goal of avoiding of depression

as equivalent to the goal of attaining equilibrium and relief. Future research should consider how helpers' and pursuers' goal definition and phrasing (achieving or avoiding) affects their strategy creativity and selection, persistence, and definitions of success.

Coding the Social Domain. The second category coded for was the social domain in which participants reported helping their pursuers. As argued earlier, it is important to identify the social domains in which helpers operate because one purpose of this exploratory study is to discover whether social catalysts operate only in the courtship domain, as the "wingperson" terminology has come to imply, or whether helpers also operate in other social domains, as well. Coding helpers' responses for the social domain in which they acted on their pursuers' behalves allows this discovery to occur.

The categories for social domain were created by applying a close, inductive reading of participants' responses. A social domain was considered to be the particular context of the social world in which helpers reported their pursuers' goals occurred. Coders were directed to distinguish the social domain in which a pursuer was pursuing a goal from the type of relationship that existed (if any) between helpers, pursuers, and targets (e.g., siblings, parent-child, cashier-customer) and from the setting in which their conversations may have occurred (e.g., dorm room, airport, medical waiting room). So, if a helper reported that the pursuer, their mother, was pursuing a goal to obtain a promotion at her workplace, and reported that they discussed resume strategies at a local coffee house, coders were instructed to code this scenario as a professional social domain because they are working to pursue the mother's professional goal.

Thirteen categories of social domains emerged; a full discussion of coding rules

and sample extracts may be found in Table 5.1. The categories, ordered by descending frequency are: academic (n = 178, 44.5%), physical health (n = 37, 9.3%), professional (n = 36, 9.0%), domestic (n = 26, 6.5%), emotional and/or mental health (n = 21, 5.3%), service (n = 21, 5.3%), athletic (n = 21, 5.3%), romantic (n = 15, 3.8%), social/relational (n = 14, 3.5%), technological (n = 9, 2.3%), other (n = 8, 2.0%), creative (n = 7, 1.8%), and travel (n = 7, 1.8%). Intercoder agreement ranged $\kappa = .88$.

At this juncture, it is important to note two things. First, less than 5 percent of helpers in this study reported acting in the courtship domain. Put differently, more than 95 percent of helpers in this study reported helping people pursue goals in social domains other than courtship. This data point lends strong support to this project's contention that even if pop culture has made more easily accessible the idea that social catalysts operate exclusively in the courtship domain, the social catalysts in this sample appear to operate in many other social domains, as well. Second: Many helpers in this study reported acting in the academic domain. Given the mean age of this sample and the locations from which the sample was recruited, this is perhaps an unsurprising finding. However, this data point, in line with other research about memory and attitude accessibility (e.g., Greene, 1995, 1997, 2007; Hong, Morris, Chiu, & Benet-Martínez, 2000; Knäuper, 1998; Krosnick, Boninger, Chuang, & Berent, 1993), suggests that the helpers in this study recalled most frequently acting in a social domain that was probably easy for their memories to access (they may have completed the questionnaire on campus or in a dorm room, they may have completed the questionnaire before or after completing school assignments, they may have been most emotionally involved with a school project, they may have had

conversations about academic topics most frequently, etc.). Third, even in a sample for whom romantic connections are particularly uncertain and important, young adults participated in a very broad range of catalyst activities. Therefore, future work should take into account this methodological point that participants' age, environments, and recent behaviors and conversations probably affect the aspects of their memories and identities they are probably most easily able to access and report.

Table 5.1

Frequencies, Coding Rules, and Sample Extracts for Social Domains

Social Domain	Frequency (% of Responses)	Coding Rules	Sample Extract
Academic	178 (44.5%)	The participant's response indicates that their help was related to the pursuer's pursuing or avoiding a goal related to their school life or school career at any level (high school, undergraduate college, graduate school). These activities may or may not happen on a campus. Continuing education credits required for some professional certifications and standing and classes or training related to continuing education credits should be categorized as Professional.	"The pursuer asked me to help them evaluate whether they would change their major at their university. The pursuer was not completely satisfied with the major they had chosen out of high school, and couldn't make up their mind as to how they felt. So they enlisted me to help organize arguments as to why they should continue with it or adjust to a different major plan." (Participant 2)

Professional	36 (9.0)	The participant's response indicates that their help was related to the pursuer's pursuing or avoiding a goal related to their employment and/or professional career or activities. These activities may or may not happen at a workplace.	"We had a machine down when I came into work. Going through the checks with the mechanic we noticed the machine was trying to run backwards. We checked the frequency drive and it was in the reverse mode. Changed it back and test ran the machine." (Participant 5)
Domestic	26 (6.5)	The participant's response indicates that their help was related to the pursuer's pursuing or avoiding a goal related to the pursuer's home life.	"Repairing the storm window frames on my father's house and reinstalling them. I washed, dried, and helped install the windows (taking about 5hrs)." (Participant 9)

Physical Health	37 (9.3)	The participant's response indicates that their help was related to the pursuer's pursuing or avoiding a goal related to their emotional and/or mental health and wellbeing.	"My father asked me to help him get into shape. He was originally 275 lbs. when he asked me to help him with this goal. We went to the gym together 5-6 times per week and he eventually shrank to his goal of 225 lbs after 6 months! I told my dad that I wanted him to be alive for as long as possible so that my children would have a grandfather later in life. I removed all junk food from my house and pushed my father at the gym as much as his body permitted." Participant (304)

Emotional/ Mental Health	21 (5.3)	The participant's response indicates that their help was related to the pursuer's pursuing or avoiding a goal related to their emotional and/ or mental health and wellbeing.	"Friend asked me to help him with anxiety. I took him to the gym every week and also advised him to seek a professional to speak to. He thought he was the only one that felt this way. He didn't realize how common it was. He also didn't realize that going to the gym and taking care of himself physically would also help him mentally. [I was] Always there to talk, offered to take him with me to the gym, took his mind off of his anxiety, told him to ask his parents to set up appointment with a psychologist." (Participant 367)

Service	21 (5.3)	The participant's response indicates that their help was related to the pursuer's pursuing or avoiding a goal related to volunteering, community service, philanthropy, or charity work. The work may or may not be affiliated with a religious organization. Obtaining and/or completing court-ordered community-service hours would be categorized as Legal; obtaining and/or completing school-mandated community service hours in order to graduate would be categorized as Academic; obtaining and/or completing fraternity- or sorority-mandated philanthropy hours would be categorized as Social. Assisting with a non-athletic extra-curricular activity (such as National Honor Society, Key Club, or mock trial) should be categorized as Service.	"I served as a volunteer at a charity organization where I stuffed backpacks with school supplies. This person could not stuff backpacks by herself. She needed a lot of volunteers to help stuff all the backpacks for the kids." (Participant 469)

Social/ Relational	14 (3.5)	The participant's response indicates that their help was related to the pursuer's pursuing or avoiding a goal related to encountering and/or increasing bonding with a social group. The social group may be defined by strict membership regulations or may be a loose, shifting collective of friends. The participant's response indicates that their help was related to the pursuer's pursuing or avoiding a goal related to non-romantic and non-professional relational concerns. Relational goals are different than emotional and/or mental health goals because the primary focus of relational goals is on improving the relationship instead of on the mental and/or emotional health of the pursuer.	"Back in September of 2019, my sister called me in tears about an issue between her and her roommate. She was asking me to help with her situation because she did not know to go forward. She had thought that her roommate she selected was going to be her roommate for her four years at this college, but after what happened she was no longer convinced. . . .I have guided her towards maintaining relationships with trustworthy people to make sure she feels safe." (Participant 515)

Athletic	21 (5.3)	The participant's response indicates that their help was related to the pursuer's pursuing or avoiding a goal related to organized sports or other physical pursuits. The nature of the competition may be individual (e.g., singles tennis), dyads (e.g., doubles tennis), or group (e.g., a soccer team). The athletic pursuit may occur at any level (e.g., amateur, intramural, intercollegiate, professional) or be sponsored (e.g., by a local mechanic) or unsponsored (e.g., a kickball team). Athletic goals are different than Physical Health goals because Athletic goals see fitness and physical health as a given necessary to achieve other parts of the goal, whereas fitness and physical health are the goals themselves.	"I participate on the club field hockey team at [University]. One of my friends watched me perform a skill, which is essentially hitting the ball with the opposite side of your stick (a reverse hit). She expressed her long-held desire to be able to do this hit. Thus, she asked me to help her and teach her how to do it. I gladly accepted to help and after practice one day, I told her to do explicitly what I was told to do to learn. We stayed for about 45 minutes after practice and until she felt confident in her ability to do it. The next practice, she showed off her awesome new skill and everyone was so impressed." (Participant 363)

Romantic	15 (3.8)	The participant's response indicates that their help was related to the pursuer's pursuing or avoiding a goal related to matters of flirting, dating, courtship, and/or beginning, maintaining or ending romantic relationships.	"One of my best friends was interested in dating a mutual friend that we met through work. She was unsure of whether or not she should pursue her feelings for him but was very interested in what things might become between them. I helped her weigh the pros and cons of what might happen between them especially because they would be long distance during the school year but ultimately encouraged her to follow her heart and she decided to go for it and they've been dating for a few months now." (Participant 339)
Other	8 (2.0)	Use this category when a response provides insufficient information to categorize it into one of the social domains.	"To help decide what to wear, she said she didn't know what to wear." (Participant 553)

Creative	7 (1.8)	The participant's response indicates that their help was related to the pursuer's pursuing or avoiding a goal related to the pursuer's non-professional, non-academic, non-athletic creative pursuits.	"My pursuer asked me to help him by listening to his musical performance and telling him what he can do better. I would listen to him perform the same piece of music a few times a week and give him feedback each day. This was in preparation for a performance that happened in early November, and I have been listening to him perform it since the beginning of the semester, on a regular basis. I would allow him to ask me specific questions about things that I did or did not notice while he was playing. My skills are derived from years of close listening to music and experience listening critically to music, as well as myself being a performing musician who executes musical ideas on a regular basis." (Participant 654)

Travel	7 (1.8)	The participant's response indicates that their help was related to the pursuer's pursuing or avoiding a goal related to some aspect of the pursuer's travel, such as transportation, housing, food, entertainment or cultural events, and/or at the best cost-quality ratio possible to the destination, at the destination, or while returning from the destination.	"My friend came in town for an AIPAC conference but she needed a place to stay after the conference was over before she left for her flight at BWI so I let her stay in my dorm with me and took her out to dinner. I gave my pursuer a place to stay when she was in town. The information that I had was how far American University was from the airport versus University of Maryland, the fact that she couldn't take the Metro and would have to Uber. I was giving her moral support because I was helping her with her travels and not leaving her to figure it out alone." (Participant 434)

Technological	9 (2.3)	The participant's response indicates that their help was related to the pursuer's pursuing or avoiding a goal related to some aspect of the pursuer's technological life.	"I joined the combat robotics team at [University]. My team wanted to create a robot, but since no one else was an engineering major I had to be the one who created the CAD model for our team's design. While my team wanted to create the CAD, they couldn't, thus failing, and I had to help the team despite not truly knowing how to use the CAD software. It required knowledge of the CAD program which no one had and I had to develop. I was the only with access to the software, thus I had to be the one who did it. I also was the only one with any information and semi-background when dealing with CAD, so I was also the one to do it." (Participant 390)

Coding the resources helpers provided. The third category coded for was what kind of resources helpers provided their pursuers. Helpers were theorized to affect their pursuers' resources in three ways: By increasing the number of of their pursuers' resources, by diversifying their pursuers' resources, and by showing their pursuers how to make better use of their resources. Intercoder agreement $\kappa = .91$.

Increasing of pursuers' resources. Responses that described helpers making more numerous, either in number or amount, resources that pursuers already had available should be categorized as increasing the number of pursuers' resources.

Diversifying pursuers' resources. Responses that described helpers introducing new resources the pursuers did not already have available or that pursuers could not access without the helpers' intervention should be categorized as diversifying the number of pursuers' resources.

Making better use of pursuers' existing resources. Responses that described helpers taking pursuers' existing resources and showing pursuers new ways to use those resources (e.g., using existing resources more efficiently, recombining or reconfiguring existing resources) should be categorized as increased the number of pursuers' resources. Responses that make reference to adding resources of the kind that pursuers already have should be categorized as Increasing Pursuers' Resources; responses that make reference to adding resources of a kind different those pursuers already have should be categorized as Diversifying Pursuers' Resources.

Coding How Helpers Affected Pursuers' Resources. The fourth category coded

for was how helpers affected their pursuers' resources. An earlier section of the paper identified three ways helpers could affect their pursuers' resources: by increasing the number or amount of resources their pursuers could access, by improving the diversity of resources their pursuers could access, and by helping their pursuers make better use of resources they already had. How helpers affected their pursuers' resources was operationalized as the social support strategies Goldsmith (2004) discussed and that were coded for in the first study reported in this paper: informational, esteem, emotional, and network, tangible, and combinations thereof. Intercoder agreement $\kappa = .93$.

Informational. Informational support occurs when one person provides another person knowledge, advice, and/or feedback about a topic.

Emotional. Emotional support occurs when one person provides another person with demonstrations of care, concern, empathy, and/or sympathy, allows the other person to vent negative emotions, and/or encourages the other person to share his or her feelings.

Esteem. Esteem support occurs when one person attempts to enhance another person's self-worth through, for example, expressing admiration or respect.

Network. Network support occurs when one person provides another person messages that reflect the person's belongingness in an ingroup/social network and/or by expanding his or her interpersonal networks. (CG: Takes a much more conservative view of networks: To sever a network, the parties must already be in a relationship of some sort; meeting at the location of wingmanning is not sufficient grounds for being in a network. Severing nascent networks is not considered a

network support; must have interacted at least twice to be considered as sharing a network.)

Tangible. Tangible support occurs when one person provides another person necessary physical aid in the form of goods and services.

Other. Responses that do not fit into any of the above categories about who controls targeting should be categorized here.

Coding the aspects of pursuers' wellbeing helpers reported attending to. This study coded the aspects of pursuers' wellbeing that helpers reported attending to in response to Clark and Mills' (Clark, 1981, 1984; Clark & Mills, 1993) findings that people in communal relationships attending to their partner's wellbeing and following the findings reported in the previous study that offensive and defensive wingpeople attended differentially to their pursuers' wellbeing concerns. In order to be coded as an instance of attention to a pursuers' wellbeing, helpers must explicitly describe focusing on or moving to protect, create or enhance that aspect of wellbeing. Intercoder agreement $\kappa = .84$.

Not enough information. The response contains too little description to affirmatively say that the helper attended to an aspect of the pursuer's wellbeing.

Happiness. The response makes explicit reference to attending to and/or wanting to maintain, improve, or keep from dipping the pursuers's happiness and joy.

Physical health. The response makes explicit reference to attending to and/or wanting to maintain, improve, or keep from dipping aspects of the respondent's general physical condition and/or health. References to pursuer's athleticism and physical health (such as gaining muscle, losing weight, or quitting smoking) all

count as references to wellbeing instead of to safety because they do not pose or alleviate acute, immediate health concerns or risks to bodily autonomy.

Academic. The response makes explicit reference to attending to and/or wanting to maintain, improve, or keep from dipping a pursuer's academic future. References may refer to something in the pursuer's immediate future (e.g., tomorrow's quiz) or something in the medium or long term (e.g., a semester grade, graduating GPA, or applying to undergraduate or graduate programs).

Superordinate group. The response makes explicit reference to attending to and/or wanting to maintain, improve, or keep from dipping the pursuer's membership or standing in a group (*group* is used in a manner consistent with discussions of social identity theory). References to making sure the pursuer doesn't sully chances of joining a group (e.g., Greek organization, service group) or to helping the pursuer maintain a position in a group (e.g., helping with something because the pursuer is the Vice President of Something and an activity needs to be completed if the pursuers is to keep that position) are examples of this.

Financial. The response makes explicit reference to attending to and/or wanting to maintain, improve, or keep from dipping a pursuer's access to money and/or employment. Employment was added to financial because helpers' responses indicated that they were concerned with helping a pursuer get or keep a job because of the financial consequences that would result of the pursuer failed to get or keep a job. References to wanting to get or keep a job because the pursuer wanted to work for a specific organization and which do not include explicit reference to

finances should be categorized as Superordinate Group.

Comfort. The response makes explicit reference to attending to and/or wanting to maintain, improve, or keep from dipping a pursuer's comfort. References to a pursuer's comfort are distinct from references to a pursuer's happiness because happiness refers to a specific discrete, time-limited emotional experience, where as comfort may be physical, emotional, or mental and refers to a more diffuse, longer-term concern that the pursuer be at ease and unperturbed.

Coding the aspects of pursuers' safety helpers reported attending to. This study also coded the aspects of pursuers' safety that helpers reported attending to in response to Clark and Mills' (Clark, 1981, 1984; Clark & Mills, 1993) findings that people in communal relationships attending to their partner's safety and following the findings reported in the previous study that offensive and defensive wingpeople attended differentially to their pursuers' safety concerns. In order to be coded as an instance of attention to a pursuers' safety, helpers must explicitly describe focusing on or moving to protect, create or enhance that aspect of wellbeing. Intercoder agreement $\kappa = .85$.

Not enough information. The response contains too little description to affirmatively say that the helper attended to an aspect of the pursuer's safety.

Security of physical structure. The response makes explicit reference to securing the pursuer's physical structure in order to maintain, improve, or keep from dipping the pursuer's safety.

Physical, bodily threat to pursuer. The response makes explicit reference to securing and/or promoting the pursuer's physical, bodily autonomy. References

may be to situations of interpersonal danger (e.g., a mugging) or to individual danger (e.g., the pursuer is walking on beam s/he does not know to be unstable but the helper does).

Health. The response makes explicit reference to securing, promoting, and/or maintaining the pursuer's health. To be categorized as attending to the safety aspect of pursuer's, the helper's description must make specific reference to an acute, immediate threat to the integrity of the pursuers' health (e.g., monitoring the pursuer during an episode of presumed alcohol poisoning, changing the pursuer's post-operative bandages). Longer-term, more diffuse health concerns should be categorized as the helper attending to the pursuer's physical health wellbeing.

Scales

Several scales were created to assess the constructs central to this study; all items may be found in the Appendix, which contains the full questionnaires. After the purpose-built scales are discussed, the established scales used to measure personality traits will be discussed. To assess constructs central this study, this author created scales based on participants' responses to Study 1 and based on the theoretical arguments described earlier. Established, validated scales were used to assess participants' personality traits. Each scale was assessed on a 0-10 scale, such that 0 meant that the statement was not true of or for the participant at all and 10 meant that the statement was completely true of or for the participant. The entire questionnaire may be found in the Appendix. The scales are described according to the order in which participants encountered them in the question-

naire.

Importance of Pursuers' Goals to Helpers. Three scales were created to assess the importance of the pursuers' goals to the helpers: the general importance of pursuers' goal, importance of pursuers' safety, and importance of pursuers' wellbeing. Larger values indicate that the pursuer's goal was more important to the helper. The four items assessing the general importance of pursuers' goals to helpers showed good reliability (Cronbach's α = .90). The helpers in this study reported that their pursuers' goals were generally rather important to them (M = 7.70, SD = 1.44). The four items assessing the importance of the pursuers' safety to helpers showed good reliability (Cronbach's α = .89). The helpers in this study reported that their pursuers' safety goals were not particularly important to them (M = 2.22, SD = 2.46). This was not similar to the Study 1 finding, and may be the first indication of many that aspects of being a social catalyst differs by the social domains in which the goal occurs. The five items assessing the importance of the pursuers' wellbeing goals to helpers showed acceptable reliability (Cronbach's α = .77). The helpers in this study reported that their pursuers' wellbeing goals were moderately important to them (M = 5.54, SD = 1.92). General importance and safety importance each had moderate, positive statistically significant correlations with wellbeing importance; the correlation between general importance and safety importance was not statistically significant. Correlations among the importance scales and each scale's descriptive statistics by type of helper and social domain appear in Tables 5.2-5.4 below.

Table 5.2

Correlations Among Goal Importance Scales

Variables	1	2	3
1. General Importance	-		
2. Safety Importance	0.09	-	
3. Wellbeing Importance	0.36**	0.51**	-

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Table 5.3

Descriptive Statistics for Importance Scales by Type of Helper

Type of Helper	Scale					
	Importance, General		Importance, Safety		Importance, Wellbeing	
	M	*SD*	*M*	*SD*	*M*	*SD*
Offensive	7.72	1.44	2.05	2.35	5.47	1.93
Defensive	7.69	1.22	3.83	3.05	6.75	1.66

Table 5.4

Descriptive Statistics for Importance Scales by Social Domain

Social Domain	Scale					
	Importance, General		Importance, Safety		Importance, Wellbeing	
	M	*SD*	*M*	*SD*	*M*	*SD*
Academic	7.72	1.32	1.70	2.03	5.45	1.85
Professional	8.04	1.45	2.06	2.27	5.01	2.08
Domestic	7.89	1.52	2.81	3.21	5.32	2.36
Physical Health	7.35	1.62	3.54	2.85	6.40	1.80
Emotional/ Mental Health	7.35	2.06	4.35	2.45	6.55	1.99
Service	8.02	0.99	1.69	2.32	4.70	1.41
Social/ Relational	7.80	1.70	2.86	2.69	6.07	2.41
Athletic	7.96	1.34	1.07	1.29	6.00	1.38
Romantic	7.42	1.45	2.48	2.39	6.08	2.33
Other	7.38	2.05	3.50	3.66	5.78	2.23
Creative	7.87	0.63	0.39	0.67	4.73	1.38
Travel	7.43	1.25	2.75	3.02	4.74	1.95
Technological	7.64	0.90	1.03	0.93	4.87	1.34

Helpers' Perception of Obstacle Size. One scale with six items was created to assess helpers' perceptions of the size of the obstacle their pursuers faced. Larger values indicate that participants perceived as larger the obstacle(s) blocking helpers' successful

goal pursuit. The scale showed good reliability (Cronbach's $\alpha = .86$). The helpers in this study reported perceiving that their pursuers' obstacles were not particularly large ($M = 2.69$, $SD = 2.02$). Tables 5.5 and 5.6 break out the scale's descriptive statistics by type of helper and by social domain.

Table 5.5

Descriptive Statistics for Perceived Obstacle Size Scale by Type of Helper

	Scale	
Type of Helper	Perceived Size of Obstacle Separating the Pursuer and the Pursuer's Goal	
	M	*SD*
Offensive	2.59	2.02
Defensive	3.14	2.06

Table 5.6

Descriptive Statistics for Perceived Obstacle Size Scale by Social Domain

	Scale	
Social Domain	Perceived Size of Obstacle Separating the Pursuer and the Pursuer's Goal	
	M	*SD*
Academic	2.34	1.92
Professional	2.95	2.23
Domestic	2.38	2.09
Physical Health	2.94	2.26
Emotional/Mental Health	3.92	2.02
Service	3.08	1.55
Social/Relational	3.94	2.27
Athletic	1.89	1.57
Romantic	2.54	1.87
Other	2.57	2.40
Creative	2.76	2.66
Travel	2.83	1.68
Technological	2.15	1.54

Helpers' Motivations. Three scales were created to assess the motivations helpers were theorized to have for supporting their pursuers in seeking their goals: personal motivations, dyadic motivations, and communal motivations. It was necessary to create separate scales for each motivation to allow participants to report accurately their own combinations of motivations without imposing on them a predefined and potentially

incorrect structure of how their motivations should (or should not) be. The items that composed these scales were drawn from the free responses of participants in Study 1. Larger values indicate that helpers reported acting more from that motivation. The four items that assessed the extent to which helpers in this study reported acting from personal motivations showed suboptimal reliability (Cronbach's α = .65). Five items were originally written to assess this motivation, but one had to be dropped to obtain even this degree of reliability. The suboptimal reliability of the personal motivation scale may reflect the fact that helpers in romantic contexts have personal motivations for helping that do not apply to other domains. The helpers in this study tended not to endorse acting from a personal motivation (M = 3.51, SD = 1.92). The five items that assessed the extent to which participants reported acting from dyadic motivations showed acceptable reliability (Cronbach's α = .76). The helpers in this study also tended not to endorse acting from a dyadic motivation (M = 2.91, SD = 2.01). Finally, the five items that assessed the extent to which participants reported acting from communal motivations showed good reliability (Cronbach's α = .87). The helpers endorsed acting from a communal motivation to a moderate degree (M = 6.64, SD = 2.04). Both personal and communal motivations had small, positive statistically significant correlations with dyadic motivation; there was no statistically significant correlation between personal motivation and communal motivation. Correlations among the motivation scales appear in Table 5.7; Tables 5.8 and 5.9 break out each scale's descriptive statistics by type of helper and social domain.

Table 5.7

Correlations Among Motivation Scales

Variables	1	2	3
1. Personal Motivation	-		
2. Dyadic Motivation	0.32**	-	
3. Communal Motivation	-0.21	.12*	-

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Table 5.8

Descriptive Statistics for Motivation Scales by Type of Helper

Type of Helper	Scale					
	Motivation, Personal		Motivation, Dyadic		Motivation, Communal	
	M	*SD*	*M*	*SD*	*M*	*SD*
Offensive	3.58	1.90	2.89	2.03	6.61	2.06
Defensive	2.62	1.85	2.56	1.44	7.32	1.63

Table 5.9

Descriptive Statistics for Motivation Scales by Social Domain

Social Domain	Scale					
	Motivation, Personal		Motivation, Dyadic		Motivation, Communal	
	M	*SD*	*M*	*SD*	*M*	*SD*
Academic	3.40	1.77	2.64	1.93	6.42	1.97
Professional	3.83	1.88	2.97	2.27	6.32	2.17
Domestic	3.70	2.24	4.56	1.84	7.38	1.81
Physical Health	3.50	2.05	2.60	1.92	6.91	2.27
Emotional/Mental Health	2.20	1.74	3.59	1.79	8.05	1.50
Service	4.26	1.94	2.23	1.80	5.91	1.97
Social/Relational	2.68	2.01	3.29	2.15	8.44	0.85
Athletic	4.02	1.47	2.48	1.29	6.41	2.00
Romantic	2.98	2.33	2.39	2.08	6.63	2.34
Other	3.88	1.94	4.55	1.95	6.70	1.78
Creative	5.18	1.13	3.14	2.03	7.06	1.66
Travel	4.71	2.25	3.00	2.07	5.89	1.94
Technological	3.81	1.60	2.38	1.87	6.04	2.57

Perceived Substitutability of Helpers. Three scales were created to assess the degree to which helpers believed that they and their help were interchangeable with others: the degree to which helpers thought that anyone could have helped the pursuer, the degree to which helpers thought that their skills were interchangeable with others' skills,

and the degree to which helpers thought that others would be willing to help their pursuers even if they did not necessarily possess the skills to do so. It was necessary to create separate scales for each type of substitutability because the each of the three aspects of substitutability measures a different aspect of why helpers might perceive themselves as substitutable with another person. Specifically, helpers might think that pursuers just need another person and that any person would do (e.g., anyone could be a passenger in a car so the pursuer could gain access to a high-occupancy vehicle lane) or that pursuers might need a specific person (such as a specific person to sign a marriage certificate). Helpers might also think that pursuers need a rare skill set (e.g., instructions to embroider in the Hardanger style) or a common one (e.g., the ability to tell time). Finally, helpers might believe that pursuers might want someone who is particularly willing to help the pursuer or they might think that pursuers do not particularly care if the helper is willing to help because they just need to achieve the goal (the example of completing any farm chore works well for both cases). Larger values indicate that helpers reported an increased belief that they, their skills, and/or their willingness to help was substitutable. The two items that assessed the degree to which helpers in this study believed that anyone could have helped the pursuer showed good reliability ($r = .68$, $p < .001$, Cronbach's $\alpha = .80$). Three items were originally written to assess this type of substitutability, but one had to be dropped to improve reliability. The helpers in this study reported that they believed to a moderate degree that they could be substituted with anyone ($M = 4.92$, $SD = 2.43$). The three items that assessed the degree to which helpers in this study believed that their skills were substitutable showed good reliability (Cronbach's $\alpha = .80$). The helpers in this

study reported that they believed their skills were moderately substitutable ($M = 4.88$, $SD = 2.24$). Finally, the three items that assessed the degree to which helpers in this study believed that their willingness to help the pursuer was substitutable showed good reliability (Cronbach's $\alpha = .85$). The helpers in this study reported that they believed that their willingness to help their pursuers was moderately substitutable ($M = 4.56$, $SD = 2.28$). The helpers in this study reported moderate-to-large, positive, statistically significant correlations among the three scales created to measure aspects of substitutability. The largest correlation was between substitutability of anyone and substitutability of skills; the smallest was between substitutability between anyone and substitutability of willingness to help. Taken together, these correlations indicate that the helpers in this study believed that although many people would have the skills to help the pursuers reach their goals, not just anyone would be willing to do so. Correlations among the substitutability scales appear in Table 5.10; Tables 5.11 and 5.12 break out each scale's descriptive statistics by type of helper and social domain.

Table 5.10

Correlations Among Substitutability Scales

Variables	1	2	3
1. Substitutability, Anyone	-		
2. Substitutability, Skills	0.64**	-	
3. Substitutability, Willingness	0.26**	.48**	-

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Table 5.11

Descriptive Statistics for Substitutability Scales by Type of Helper

Type of Helper	Scale					
	Substitutability, Anyone		Substitutability, Skills		Substitutability, Willingness	
	M	*SD*	*M*	*SD*	*M*	*SD*
Offensive	5.02	2.48	4.96	2.29	4.59	2.28
Defensive	4.50	1.90	4.10	1.77	3.68	2.24

Table 5.12

Descriptive Statistics for Substitutability Scales by Social Domain

Social Domain	Scale					
	Substitutability, Anyone		Substitutability, Skills		Substitutability, Willingness	
	M	*SD*	*M*	*SD*	*M*	*SD*
Academic	5.12	2.40	4.95	2.25	4.51	2.24
Professional	4.69	2.57	4.43	2.36	5.04	2.39
Domestic	5.63	2.68	5.27	2.81	4.51	2.49
Physical Health	4.38	2.63	4.66	2.51	4.40	2.40
Emotional/ Mental Health	5.02	1.93	5.06	2.13	5.13	2.28
Service	5.38	2.94	4.76	2.57	4.57	2.64
Social/ Relational	4.36	2.23	4.48	1.68	4.14	1.94
Athletic	5.40	2.13	5.27	1.87	4.35	2.13
Romantic	4.07	2.20	3.98	1.84	3.49	2.32
Other	4.00	2.35	5.21	2.57	5.13	1.32
Creative	5.86	2.14	6.19	2.06	4.29	3.22
Travel	5.21	3.40	6.10	1.60	4.71	2.90
Technological	4.56	1.89	4.89	1.52	4.22	1.37

Perceived Effect on Pursuers' Resources. Three scales were created to assess the degree to which helpers believed they had affected the pursuers' resources: increasing

the number of resources available to pursuers, diversifying the kind of resources available to pursuers, and helping pursuers make better use of resources they already had available. These three scales reflect the three ways helpers were theorized to be able to have effects on pursuers' resources in an earlier section. Larger values indicate that helpers reported believing more strongly that they affected their pursuers' resources. The three items that assessed the degree to which helpers believed they increased the resources available to their pursuers showed good reliability (Cronbach's α = .93). The helpers in this study reported a moderate amount of belief that they increased the number of resources available to their pursuers (M = 5.78, SD = 2.50). The two items that assessed the degree to which helpers believed they diversified the resources available to their pursuers showed good reliability (Cronbach's α = .87), although one of the original three items had to be dropped to achieve this reliability. The helpers in this study reported a moderate amount of belief that they diversified the kind of resources available to their pursuers (M = 4.28, SD = 2.66). The three items that assessed the degree to which helpers believed they helper their pursuers make better use of the resources that were already available to pursuers showed good reliability (Cronbach's α = .91). The helpers in this study reported a moderate amount of belief that they helped their pursuers make better use of the resources pursuers already had available to them (M = 5.60, SD = 2.50). There were moderate, positive statistically significant correlations among the three scales created to measure aspects of the effect helpers believed they had on pursuers' resources. These correlations indicate that the helpers in this study believed that when they improved one aspect

of a pursuer's resources, they perceived they made a small, positive effect on all aspect of a pursuer's resources. Correlations among the resources scales appear in Table 5.13; Tables 5.14 and 5.15 break out each scale's descriptive statistics by type of helper and social domain.

Table 5.13

Correlations Among Resources Scales

Variables	1	2	3
1. Resources, Increase	-		
2. Resources, Diversify	0.57**	-	
3. Resources, Better Use	0.39**	.43**	-

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Table 5.14

Descriptive Statistics for Resource Scales by Type of Helper

Type of Helper	Scale					
	Resources, Increase		Resources, Diversify		Resources, Better Use	
	M	*SD*	*M*	*SD*	*M*	*SD*
Offensive	5.80	2.53	4.21	2.68	5.62	2.53
Defensive	5.46	2.15	4.62	2.28	5.87	2.04

Table 5.15

Descriptive Statistics for Resources Scales by Social Domain

Social Domain	Scale					
	Resources, Increase		Resources, Diversify		Resources, Better Use	
	M	*SD*	*M*	*SD*	*M*	*SD*
Academic	6.09	2.35	4.58	2.63	6.30	2.00
Professional	5.97	2.53	4.17	2.75	5.02	2.74
Domestic	5.40	2.86	3.38	2.52	3.35	2.92
Physical Health	5.33	2.95	3.92	2.75	6.14	2.24
Emotional/ Mental Health	5.48	2.48	3.50	2.78	6.06	2.21
Service	4.60	2.73	3.26	2.70	3.97	2.82
Social/ Relational	5.10	2.71	3.93	2.16	5.02	2.07
Athletic	5.62	2.28	4.64	2.21	6.30	2.39
Romantic	4.98	2.96	4.67	2.93	4.18	2.87
Other	5.94	1.83	3.88	2.71	4.96	2.96
Creative	6.29	2.29	4.29	3.03	5.28	2.78
Travel	6.90	2.64	3.86	4.06	3.00	2.77
Technological	6.70	1.23	5.00	1.44	7.04	1.21

Helpers' Perceived Effectiveness. Six scales were created to assess the different facets of helper effectiveness theorized in an earlier section: how much helpers believed

they eliminated the pursuer's obstacle; how much helpers believed they decreased the size of the pursuer's obstacle; how much helpers believed they increased the size of the pursuer's obstacle; how much helpers believed they showed pursuers a new path around the obstacle; how much helpers believed that their pursuers achieved the goal; and how much helpers believed that they added utility. Larger values indicate that helpers reported stronger belief in their effectiveness. The three items that assessed how much helpers believed they eliminated the pursuer's obstacle showed good reliability (Cronbach's α = .94). The helpers in this study reported a moderate amount of belief that they eliminated a pursuer's obstacle (M = 4.48, SD = 2.71). The three items that assessed how much helpers believed they decreased the size of the pursuer's obstacle also showed good reliability (Cronbach's α = 91). The helpers in this study also reported a moderate amount of belief that they decreased the size of a pursuer's obstacle (M = 5.36, SD = 2.50). The three items that assessed how much helpers believed they increased the size of the pursuer's obstacle also showed good reliability (Cronbach's α = .95). The helpers in this study reported a very weak belief that they increased the size of a pursuer's obstacle (M = 0.98, SD = 1.80). The three items that assessed how much helpers believed they showed their pursuers a new path around the obstacle also showed good reliability (Cronbach's α = .86). The helpers in this study reported a moderate amount of belief that they showed pursuers a new path around the obstacle (M = 4.28, SD = 2.66). The three items that assessed how much helpers believed their pursuers achieved their goal also showed good reliability (Cronbach's α = .93), although one of the four items originally written to assess

this construct was eliminated from the final scale to achieve it. The helpers in this study reported a moderate amount of belief that their pursuers achieved their goal ($M = 6.73$, $SD = 2.36$). Finally, the seven items that assessed how much helpers believed they added utility showed good reliability (Cronbach's $\alpha = .92$), although one of the eight items originally written to assess this construct was eliminated from the final scale to achieve it. The helpers in this study reported a moderately strong amount of belief that they added utility ($M = 6.64$, $SD = 2.04$). The five variables that measured different ways in which helpers believed they were effective in helping their pursuers reach their goals (how much helpers believed they eliminated the pursuer's obstacle; how much helpers believed they decreased the size of the pursuer's obstacle; how much helpers believed they showed pursuers a new path around the obstacle; how much helpers believed that their pursuers achieved the goal; and how much helpers believed that they added utility) all had small-to-moderate, positive statistically significant correlations with each other, which is consistent with earlier theorizing. The largest of these correlations was between beliefs that helpers eliminated an obstacle and beliefs that helpers decreased the size of an obstacle; the smallest was between beliefs that helpers showed pursuers a new path around a goal and beliefs that helpers added utility. Beliefs that pursuers increased the number of obstacles separating pursuers from their goals did not have statistically significant correlations with either beliefs about eliminating entirely or decreasing the number of goals separating pursuers and obstacles. Beliefs about increasing the number of goals separating pursuers from their goals were, consistent with earlier theorizing, in small-to-moderate, negative statistically significant relationships with beliefs that the pursuers achieved the goal and

that the helper added utility. Finally, beliefs that helpers increased the number of obstacles separating pursuers from goals was in a small, positive statistically significant relationship with beliefs that helpers showed pursuers a new path around the goal. Correlations among the effectiveness scales appear in Table 5.16; Tables 5.17 and 5.18 break out each scale's descriptive statistics by type of helper and social domain.

Table 5.16

Correlations Among Effectiveness Perception Scales

Variables	1	2	3	4	5	6
1. Effectiveness, Eliminated	-					
2. Effectiveness, Decreased	0.69**	-				
3. Effectiveness, Increased	0.07	0.04	-			
4. Effectiveness, New Path	0.26**	0.28**	0.10*	-		
5. Effectiveness, Success	0.38**	0.37**	-0.13**	0.16**	-	
6. Effectiveness, Perceived	0.26**	0.27**	-0.38**	0.12**	0.59**	-

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Table 5.17

Descriptive Statistics for Resource Scales by Type of Helper

	Scale							
Type of Helper	Effectiveness, Eliminated		Effectiveness, Decreased		Effectiveness, Increased		Effectiveness, New Path	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Offensive	4.51	2.75	5.39	2.56	0.91	1.71	4.91	2.48
Defensive	3.93	2.52	5.50	1.95	0.59	0.87	5.24	1.61

Table 5.17

Descriptive Statistics for Resource Scales by Type of Helper

	Scale			
Type of Helper	Effectiveness, Success		Effectiveness, Perceived	
	M	*SD*	*M*	*SD*
Offensive	6.88	2.28	7.67	1.41
Defensive	5.67	3.09	7.04	1.62

Table 5.18

Descriptive Statistics for Effectiveness Scales by Social Domain

Social Domain	Scale							
	Effectiveness, Eliminated		Effectiveness, Decreased		Effectiveness, Increased		Effectiveness, New Path	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Academic	4.54	2.65	5.53	2.40	0.71	1.59	5.20	2.20
Professional	4.37	2.83	4.72	2.78	0.75	1.23	4.52	2.45
Domestic	4.97	2.73	6.33	2.10	0.87	1.56	3.58	2.96
Physical Health	4.64	2.69	5.55	2.56	1.04	1.78	5.58	2.27
Emotional/ Mental Health	3.85	2.72	5.19	2.38	1.43	2.13	5.76	2.25
Service	3.67	3.20	4.38	3.08	0.62	1.59	3.29	2.87
Social/ Relational	2.71	2.10	4.67	2.88	1.29	1.49	4.76	2.48
Athletic	4.51	2.49	5.62	2.39	1.29	1.88	5.41	2.47
Romantic	3.82	2.96	4.91	2.20	1.02	1.82	4.56	1.98
Other	5.50	2.30	5.38	2.57	1.71	2.69	5.46	2.22
Creative	5.33	3.15	6.62	2.46	0.43	0.60	5.95	2.63
Travel	4.90	3.31	5.24	3.17	0.62	1.25	3.38	3.36
Technological	6.59	2.77	5.41	3.23	1.61	2.41	4.22	2.01

Table 5.18

Descriptive Statistics for Effectiveness Scales by Social Domain

Social Domain	Scale			
	Effectiveness, Success		Effectiveness, Perceived	
	M	*SD*	*M*	*SD*
Academic	6.91	2.25	7.63	1.45
Professional	6.26	2.69	7.58	1.62
Domestic	7.78	1.77	8.20	1.13
Physical Health	6.14	2.69	7.38	1.64
Emotional/ Mental Health	6.03	2.40	7.36	0.89
Service	6.62	2.36	7.80	1.20
Social/ Relational	6.29	2.40	7.22	1.72
Athletic	7.22	2.10	7.70	1.33
Romantic	6.31	2.81	7.31	1.89
Other	7.00	1.71	7.50	1.43
Creative	8.00	1.00	7.68	0.46
Travel	8.43	1.51	8.27	1.53
Technological	6.93	3.08	7.88	0.87

Personality traits. Established and well validated scales were used to measure and control the effects of the following five personality traits: self-esteem, need to belong, helping attitudes, the Big 5 personality constructs (extraversion, agreeableness, conscientiousness, neuroticism and openness), and empathy. Larger values indicate that helpers reported having more of that particular construct. Correlations among the personality variables appear in Table 5.19; Tables 5.20 and 5.21 break out each variable's descriptive statistics by type of helper and social domain.

Self-esteem. The ten items (Rosenberg, 1965) assessing the amount of helpers' self-esteem showed good reliability (Cronbach's α = .91). The helpers in this study reported a moderate amount of self-esteem (M = 6.34, SD = 1.76).

Need to belong. The ten items (Leary et al., 2013) assessing the amount helpers reported wanting to be in close, supportive interpersonal relationships showed acceptable reliability (Cronbach's α = .83). The helpers in this study reported that they had a moderate need to belong (M = 5.46, SD = 1.61).

Helping attitudes. The nineteen items (Nickell, 1998) assessing how much helpers endorsed attitudes that promoted and approved of behaviors that helped others showed good reliability (Cronbach's α = .88). The helpers in this study reported a moderately strong endorsement of helping attitudes (M = 7.04, SD = 1.23).

The Big 5 Personality Traits. Forty-four items (John & Srivastava, 1999) comprise a five-factor model of personality. John and Srivastava conducted an extensive review of the research about the history of psychologists' attempts to best summarize aspects of personality using underlying factors. They concluded that five-factor structure, as measured by the Big Five Inventory, yielded the best psychometric properties, which is why the Big Five Inventory was used in this study. The first factor, which John and Srivastata described as measuring the extraversion, energy, and enthusiasm dimension of

personality, showed good reliability (Cronbach's α = .82). The helpers in this study reported a moderate amount of extraversion (M = 5.28, SD = 1.78). The second factor, which John and Srivastata described as measuring the agreeableness, altruism, and affection dimension of personality, showed acceptable reliability (Cronbach's α = .77). The helpers in this study reported a moderate amount of agreeableness (M = 6.47, SD = 1.30). The third factor, the conscientiousness, control, and constraint dimension of personality, showed good reliability (Cronbach's α = .81). The helpers in this study reported a moderate amount of conscientiousness (M = 5.92, SD = 1.41). The fourth factor, which measures the neuroticism, negative affectivity, and nervousness dimension of personality, showed good reliability (Cronbach's α = .83). The helpers in this study reported a moderate amount of neuroticism (M = 4.53, SD = 1.72). Finally, the fifth factor, openness, originality, and open-mindedness, showed good reliability (Cronbach's α = .80). The helpers in this study reported a moderate amount of extraversion (M = 5.86, SD = 1.47).

Empathy. The interpersonal reactivity index (Davis, 1980) was used to measure helpers' empathy. The twenty-six items showed good reliability (Cronbach's α = .80), although two items originally included in the scale had to be dropped to achieve that reliability. The helpers in this study reported a moderate amount of empathy (M = 5.34, SD = 0.95).

Table 5.19

Correlations Among Personality Variables

	SE		NTB		HA		BIGE		BIGA		BIGC		BIGN		BIGO	
SE	—															
NTB	-0.26	***	—													
HA	0.19	***	0.21	***	—											
BIGE	0.40	***	0.12	*	0.24	***	—									
BIGA	0.31	***	0.07		0.50	***	0.15	**	—							
BIGC	0.50	***	-0.05		0.38	***	0.26	***	0.41	***	—					
BIGN	-0.59	***	0.47	***	0.03		-0.22	***	-0.19	***	-0.21	***	—			
BIGO	0.11	*	0.14	**	0.22	***	0.26	***	0.15	**	0.13	**	-0.03		—	
EMP	-0.24	***	0.38	***	0.36	***	0.02		0.35	***	-0.02		0.39	***	0.28	***

Note. SE = Self-Esteem; NTB = Need to Belong; HA = Helping Attitudes; BIGE = Big 5, Extraversion; BIGA = Big 5, Agreeableness; BIGC = Big 5, Conscientiousness; BIGO = Big 5, Openness; EMP = Empathy. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 5.20

Descriptive Statistics for Personality Variables Scales by Type of Helper

	Scale							
Type of Helper	Self-Esteem		Need to Belong		Helping Attitudes		Extraversion (Big 5)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Offensive	6.37	1.75	5.48	1.60	7.08	1.16	5.27	1.80
Defensive	5.96	1.53	5.77	1.64	6.98	1.36	5.45	2.00

Table 5.20

Descriptive Statistics for Personality Variables Scales by Type of Helper

	Scale							
Type of Helper	Agreeableness (Big 5)		Conscientiousness (Big 5)		Neuroticism (Big 5)		Openness (Big 5)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Offensive	6.51	1.28	5.95	1.44	4.50	1.76	5.88	1.47
Defensive	6.53	1.34	5.82	1.28	4.95	1.36	5.97	1.75

Table 5.20

Descriptive Statistics for Personality Variables Scales by Type of Helper

	Scale	
Type of Helper	Empathy	
	M	*SD*
Offensive	5.35	0.95
Defensive	5.40	1.02

Table 5.21

Descriptive Statistics for Personality Variables Scales by Social Domain

Social Domain	Scale							
	Self-Esteem		Need to Belong		Helping Attitudes		Extraversion (Big 5)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Academic	6.30	1.73	5.55	1.46	7.14	1.15	5.23	1.80
Professional	6.29	1.82	5.29	1.91	7.00	1.05	5.33	1.68
Domestic	6.61	1.70	5.48	1.56	7.34	1.10	5.00	1.91
Physical Health	6.60	1.79	5.42	1.44	7.15	1.01	5.81	1.80
Emotional/ Mental Health	5.76	1.85	5.49	1.96	7.03	1.41	5.15	1.66
Service	6.70	1.72	5.39	1.96	7.09	0.94	5.08	1.82
Social/ Relational	6.38	1.47	5.28	1.89	6.64	1.30	4.34	1.32
Athletic	7.09	1.57	5.58	1.60	7.10	1.51	5.46	1.87
Romantic	5.87	1.49	5.40	1.55	6.92	1.57	5.61	1.84
Other	6.81	1.87	5.08	2.19	6.30	1.35	6.23	1.39
Creative	4.73	2.14	6.70	1.51	6.59	1.19	4.29	2.73
Travel	5.63	1.10	6.53	1.65	7.21	0.73	5.55	1.26
Technological	6.43	1.88	5.20	1.07	6.96	1.35	5.49	2.62

Table 5.21

Descriptive Statistics for Personality Variables Scales by Social Domain

	Scale							
Social Domain	Agreeableness (Big 5)		Conscientious-ness (Big 5)		Neuroticism (Big 5)		Openness (Big 5)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Academic	6.55	1.25	5.97	1.46	4.69	1.70	5.77	1.45
Professional	6.72	1.35	6.20	1.38	4.16	1.92	6.23	1.62
Domestic	6.77	1.22	5.81	1.55	4.42	1.77	5.82	1.62
Physical Health	6.78	1.24	6.02	1.28	4.34	1.68	6.48	1.27
Emotional/ Mental Health	6.51	1.08	6.00	1.44	4.97	2.05	5.45	1.77
Service	6.20	1.27	5.89	1.19	3.82	1.74	6.37	1.49
Social/ Relational	5.97	1.39	5.69	1.60	4.79	1.81	5.29	1.51
Athletic	6.63	1.07	6.19	1.31	4.26	1.67	5.60	1.45
Romantic	5.98	1.64	5.59	1.32	4.29	1.73	5.73	1.41
Other	5.91	1.67	5.82	1.91	4.23	1.49	5.70	1.42
Creative	6.54	1.42	5.02	2.07	4.95	2.05	5.89	1.10
Travel	6.43	1.56	5.38	1.33	5.25	1.31	6.11	1.24
Technological	5.82	1.17	6.17	1.35	4.29	1.67	6.20	1.48

Table 5.21

Descriptive Statistics for Personality Variables Scales by Social Domain

	Scale	
Social Domain	Empathy	
	M	*SD*
Academic	5.41	0.93
Professional	5.29	0.90
Domestic	5.30	0.90
Physical Health	5.35	1.06
Emotional/ Mental Health	5.44	1.02
Service	5.25	1.07
Social/ Relational	5.32	0.69
Athletic	5.02	0.91
Romantic	5.33	1.23
Other	4.92	0.76
Creative	6.24	1.01
Travel	5.60	0.99
Technological	5.10	1.04

After completing the interpersonal reactivity index, participants were asked for basic demographic information such as their age, sex, and race/ethnicity, were thanked

for their participation, and then directed out of the study.

Results

This study is the first that has investigated whether social catalysts operate in social domains other than courtship and is the first to investigate social catalysts quantitatively. Therefore, a series of preliminary analyses will be presented to establish the context necessary to understand the analyses designed to test the hypotheses and investigate the research questions offered above, which propose that helpers aid their pursuers' goal pursuit by decreasing their pursuers' obstacles and improving their resources.

Preliminary Analyses

Several preliminary analyses are presented first to offer context about this data set. This will be useful background when we proceed to the hypotheses and research questions, and may be informative to those who pursue these topics in the future.

Frequencies of Helpers Across Domains

The first preliminary analysis concerns how many helpers in this study reported acting in each of the fourteen social domains. The helpers in this study reported statistically significant differences in how frequently they were offensive and defensive helpers across the social domains, χ^2 (12, N = 400) = 61.60, $p < .001$, Cramer's V = .39. (Detail about the frequencies of helpers in each domain may be found in Table 5.22 below.). It is important to note that participants in this sample did not report being defensive helpers in the following six social domains: professional, service, social/relational, creative, travel, and technological. This result may be because, as noted earlier, there may be some features about this sample (e.g., environment, amount of life experience, access to re-

sources) that made them unable to recall or unable to participate in helping people pursue goals in these social domains. An alternate explanation is also plausible: perhaps there may be some domains where people either only work to move toward goals and/or only conceptualize their movement as being toward a goal, thus rendering defensive helpers unnecessary because pursuers do see themselves as avoiding a goal. Consider that for the professional, social/relational social and creative domains, a defensive helper would help a pursuer avoid employment with a particular organization, having a friendship with a particular person, and pursuing a particular creative decision for a project, which is not how a layperson might understand the goals of finding a different job, joining a different friendship group, or modifying a work in progress. With respect to the service, travel, and technological domains, it is unclear that these allow for the concept of moving away from a goal. Moving away from a goal in these three service domains would simply be getting distracted from a cooking commitment, getting bullied into taking a vacation, and giving in to financial temptation to overuse Steve's mining abilities. Alternately, one may imagine domains and samples familiar with and sensitive to them in which keeping pursuers away from a goal is a common occurrence. For example, one could imagine that querying a sample with a larger proportion of exterminators might show more defensive helpers in the domestic social domain. Thus, this study seems to provide emerging evidence that a new way to organize and gain insight into social domains is through how people conceptualize the types of goals possible in social domains. It may be worthwhile to explore common patterns of expression in explaining one's behavior, to see if offensive and defensive orientations are born in language or social reality.

Table 5.22

Frequency of Offensive and Defensive Helpers Across Social Domains

Social Domain	Type of Helper		
	Offensive Helper (Row%)	Defensive Helper (Row%)	Total Helpers (% of Sample)
Academic	172 (96.6)	6 (3.4)	178 (44.5)
Professional	36 (100)	0 (0)	36 (9)
Domestic	25 (96.2)	1 (3.8)	26 (6.5)
Physical Health	30 (81.1)	7 (18.9)	37 (9.25)
Emotional/ Mental Health	18 (85.7)	3 (14.3)	21 (5.25)
Service	21 (100)	0 (0)	21 (5.25)
Social/Relational	14 (100)	0 (0)	14 (3.47)
Athletic	20 (95.2)	1 (4.8)	21 (5.25)
Romantic	8 (53.3)	7 (46.7)	15 (3.75)
Other	7 (87.5)	1 (12.5)	8 (2)
Creative	7 (100)	0 (0)	7 (1.75)
Travel	7 (100)	0 (0)	7 (1.75)
Technological	9 (100)	0 (0)	9 (2.25)

χ^2 (12, N = 400) = 61.60, $p < .001$, Cramer's V = .39

Sex Differences

Chapter 2 reported evidence of some sex differences in the courtship domain, such that wingpeople tended to help pursuers of the same sex and that wingpeople tended to provide male pursuers offensive help and female pursuers defensive help Because one of the purposes of this study was to find initial evidence of whether and how helpers acted in social domains other than the courtship domain investigated in Chapter 2, exploring

whether sex differences occurred in this study was necessary. The existence of sex differences in this study were explored in three ways: sex differences between types of helpers, sex differences across social domains, and sex differences among variables. Each result will be presented in turn.

The first exploration of sex differences concerned whether male and female helpers were offensive and defensive helpers at different frequencies. As detailed in Table 5.23, there were no statistically significant differences in the frequency with which male and female participants were offensive or defensive helpers (χ^2 (2, N = 378) = 0.86, p = .958, Cramer's V = .02). Thus, this study indicates that there are no sex differences in type of wingmanning outside the courtship domain.

Table 5.23

Type of Helper by Sex

Type of Helper	Helper's Sex		
	Female Helper (Row%)	Male Helper (Row%)	Total Helpers (% of Sample)
Offensive	221 (62.6)	131 (37.1)	353 (93.39)
Defensive	16 (64.0)	9 (36.0)	25 (6.61)

χ^2 (2, N = 378) = 0.86, p = .958, Cramer's V = .02

The second exploration of sex differences concerned whether male and female helpers acted in different social domains at different frequencies. As detailed in Table 5.24, there were no statistically significant differences in the frequency with which male and female helpers acted across social domains (χ^2 (24, N = 378) = 21.0, p = .639, Cramer's V = .17). Thus, this study indicates there are no sex differences in the social

domains in which male and female helpers operate.

Table 5.24

Frequency of Male and Female Helpers Across Social Domains

Social Domain	Sex of Helper		
	Female Helpers (Row%)	Male Helpers (Row%)	Total Helpers (% of Sample)
Academic	109 (64.1)	61 (35.9)	170 (44.97)
Professional	21 (61.8)	13 (38.2)	33 (8.73)
Domestic	18 (69.2)	8 (30.8)	26 (6.88)
Physical Health	16 (45.7)	18 (51.4)	34 (8.99)
Emotional and/or Mental Health	15 (71.4)	6 (28.6)	21 (5.56)
Service	12 (57.1)	9 (42.9)	21 (5.56)
Social/Relational	9 (69.2)	4 (30.8)	13 (3.44)
Athletic	11 (61.1)	7 (38.9)	18 (4.76)
Romantic	9 (69.2)	4 (30.8)	13 (3.44)
Other	4 (66.7)	2 (33.3)	6 (1.59)
Creative	6 (85.7)	1 (14.3)	7 (1.85)
Travel	4 (80)	1 (20)	5 (1.32)
Technological	3 (33.3)	6 (66.7)	9 (2.38)

χ^2 (12, N = 400) = 61.60, $p < .001$, Cramer's V = .39

The third and final exploration of sex differences was a series of independent-samples *t*-tests of the continuous created and established scales described above using the helper's sex as the grouping variable. Table 5.25 summarizes the results of these *t*-tests. Of the 29 independent-samples *t*-tests conducted, nine (31%) showed statistically significant differences between male and female helpers. In this sample, female helpers reported

greater amounts of: how important they generally found their pursuers' goals to be; how much they acted from dyadic and communal motivations; need to belong; helping attitudes; conscientiousness; neuroticism; and empathy. In contrast, male helpers reported greater self-esteem. Thus, women seemed to be more other-oriented than men. In addition, male and female helpers reported the same amounts of: how important their pursuers' safety and wellbeing goals were to them; perceived obstacle size; personal motivation; and all substitutability, resource, and effectiveness measures (β to detect effects = .99). Taken together, these findings suggest that the male and female helpers in this study largely believed that they acted similarly for and with a similar effectiveness on their pursuers' behalves, although the female helpers reported that they believed their pursuers' goals were more important than did male helpers.

Table 5.25

Results of Independent Samples t-tests of Variables of Each Variable by Sex of Helper

Variable	Female Helpers (n = 237)		Male Helpers (n = 140)		t (370)[1]	Cohen's d
	M	*SD*	*M*	*SD*		
Importance, General	7.89	1.37	7.43	1.47	**-3.06****	**-0.32**
Importance, Safety	2.05	2.41	2.41	2.48	**1.39**	**0.14**
Importance, Wellbeing	5.68	1.94	5.34	1.94	**-1.61**	**-0.17**
Obstacle Size	2.74	2.04	2.45	1.98	**-1.37**	**-0.14**
Motivation, Personal	3.68	1.97	3.33	1.76	**-1.74**	**-0.18**
Motivation, Dyadic	3.19	2.02	2.52	1.86	**-3.21*****	**-0.33**
Motivation, Communal	7.06	1.88	5.96	2.13	**-5.19*****	**-0.54**
Substitutability, Anyone	4.95	2.40	5.13	2.52	**0.69**	**0.07**
Substitutability, Skills	4.93	2.21	4.97	2.34	**0.16**	**0.02**
Substitutability, Willingness	4.60	2.31	4.56	2.22	**-0.15**	**-0.02**
Resources, Increased	5.82	2.57	5.72	2.36	**-0.39**	**-0.04**
Resources, Diversify	4.27	2.62	4.02	2.62	**-0.90**	**-0.09**
Resources, Better Use	5.59	2.55	5.83	2.36	**0.94**	**0.10**

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

[1] The degrees of freedom reported in the table header are the fewest degrees of freedom used for the test. The range of degrees of freedom for all tests was 370-375; the modal number of degrees of freedom for these tests was 375.

Table 5.25

Results of Independent Samples t-tests of Variables of Each Variable by Sex of Helper

Variable	Female Helpers (n = 237)		Male Helpers (n = 140)		t (370)[1]	Cohen's d
	M	*SD*	*M*	*SD*		
Effectiveness, Eliminated	4.43	2.81	4.47	2.63	0.13	0.01
Effectiveness, Decreased	5.37	2.60	5.34	2.43	-0.10	-0.01
Effectiveness, Increased	0.94	1.78	0.81	1.51	-0.72	-0.07
Effectiveness, New Path	5.03	2.48	4.74	2.32	-1.13	-0.12
Effectiveness, Achieved	6.82	2.38	6.64	2.42	-0.68	-0.07
Effectiveness, Utility	7.63	1.52	7.59	1.30	-0.24	-0.02
Self-Esteem	6.19	1.71	6.62	1.73	2.33*	0.24
Need to Belong	5.87	1.46	4.99	1.62	-5.40***	-0.56
Helping Attitudes	7.32	1.07	6.65	1.18	-5.69***	-0.59
Extraversion (Big 5)	5.39	1.82	5.06	1.78	-1.68	-0.17
Agreeableness (Big 5)	6.60	1.25	6.35	1.32	-1.86	-0.19
Conscientiousness (Big 5)	6.13	1.35	5.64	1.50	-3.26***	-0.34
Neuroticism (Big 5)	4.95	1.69	3.86	1.59	-6.20***	-0.64
Openness (Big 5)	5.92	1.50	5.84	1.45	-0.52	-0.05
Empathy	5.62	0.92	4.92	0.85	-7.42***	-0.77
Age	19.48	2.48	19.51	3.90	0.09	0.01

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

[1] The degrees of freedom reported in the table header are the fewest degrees of freedom used for the test. The range of degrees of freedom for all tests was 370-375; the modal number of degrees of freedom for these tests was 375.

Differences Between Types of Helpers

Because this is an initial, exploratory study, it behooves us to explore what differences, if any, exist between offensive and defensive helpers on the created and established variables described above. The results of these 29 independent-samples *t*-tests appear in Table 5.26, and 6 (21%) were statistically significant. There are several important details to note. First, of the variables measuring the importance of the pursuer's goals to the helpers, the statistically significant differences between offensive and defensive helpers was for how important the pursuer's safety was to the helper ($t(398) = -3.66$, $p = .016$, Cohen's $d = -0.74$) and how important the pursuer's wellbeing was to the helper ($t(398) = -3.29$, $p < .001$, Cohen's $d = -0.67$), such that defensive helpers reported greater concern with their pursuers' wellbeing and safety.. Although both offensive helpers and defensive helpers reported mean scores below the scale's theoretical midpoint for their pursuers' safety ($M = 2.05$, $SD = 2.34$ for offensive helpers; $M = 3.83$, $SD = 3.05$ for defensive helpers) and wellbeing ($M = 5.47$, $SD = 1.93$ for offensive helpers; $M = 6.75$, $SD = 1.66$ for defensive helpers), defensive helpers did report being more concerned with their pursuers' safety and wellbeing goals, a finding consistent with the study reported in Chapter 4.

Table 5.26

Results of Independent Samples t-tests of Mean Difference of Each Variable by Type of Helper

Variable	Offensive Helpers		Defensive Helpers		t (377)[1]	Cohen's d
	M	*SD*	*M*	*SD*		
Importance, General	7.72	1.44	7.69	1.22	**0.08**	**0.02**
Importance, Safety	2.05	2.34	3.83	3.05	**-3.66*** **	**-0.74**
Importance, Wellbeing	5.47	1.93	6.75	1.66	**-3.29*** **	**-0.67**
Obstacle Size	2.59	2.02	3.14	2.06	**-1.33**	**-0.27**
Motivation, Personal	3.58	1.90	2.62	1.85	**2.50** **	**0.51**
Motivation, Dyadic	2.89	2.03	2.56	1.34	**0.82**	**0.17**
Motivation, Communal	6.61	2.06	7.32	1.3	**-1.73**	**-0.35**
Substitutability, Anyone	5.02	2.48	4.50	1.90	**1.04**	**0.21**
Substitutability, Skills	4.96	2.29	4.10	1.77	**1.86**	**0.38**
Substitutability, Willingness	4.59	2.28	3.68	2.24	**1.96***	**0.40**
Resources, Increased	5.80	2.53	5.46	2.15	**0.67**	**0.14**
Resources, Diversify	4.21	2.68	4.62	2.28	**-0.75**	**-0.15**
Resources, Better Use	5.62	2.53	5.87	2.04	**-0.49**	**-0.10**

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Table 5.26

Results of Independent Samples t-tests of Mean Difference of Each Variable by Type of Helper

Variable	Offensive Helpers		Defensive Helpers		*t* (377)[1]	Cohen's *d*
	M	*SD*	*M*	*SD*		
Effectiveness, Eliminated	4.51	2.75	3.93	2.52	**1.05**	**0.21**
Effectiveness, Decreased	5.39	2.56	5.50	1.95	**-0.22**	**-0.04**
Effectiveness, Increased	0.91	1.71	0.59	0.87	**0.93**	**0.19**
Effectiveness, New Path	4.91	2.48	5.24	1.61	**-0.67**	**-0.14**
Effectiveness, Achieved	6.88	2.28	5.67	3.09	**2.55****	**0.52**
Effectiveness, Utility	7.67	1.41	7.04	1.62	**2.18***	**0.44**
Self-Esteem	6.37	1.75	5.96	1.53	**0.25**	**0.23**
Need to Belong	5.48	1.60	5.77	1.64	**0.38**	**-0.18**
Helping Attitudes	7.08	1.16	6.98	1.36	**0.66**	**0.09**
Extraversion (Big 5)	5.27	1.80	5.45	2.00	**0.62**	**-0.10**
Agreeableness (Big 5)	6.51	1.28	6.53	1.34	**0.94**	**-0.02**
Conscientiousness (Big 5)	5.95	1.44	5.82	1.28	**0.65**	**0.09**
Neuroticism (Big 5)	4.50	1.76	4.95	1.36	**0.20**	**-0.26**
Openness (Big 5)	5.88	1.47	5.97	1.75	**0.78**	**-0.06**
Empathy	5.35	0.95	5.49	1.02	**0.47**	**-0.15**
Age	19.51	3.16	19.08	1.15	**0.50**	**0.14**

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

[1] The degrees of freedom reported in the table header are the fewest degrees of freedom used for the test. The range of degrees of freedom for all tests was 377-398; the modal number of degrees of freedom for these tests was 398.

Perhaps defensive helpers' relatively small concern for their pursuers' safety goals is the result of this study's design, which expanded the social domains investigated to beyond solely the courtship domain. This finding suggests that, unlike defensive helpers in the courtship domain, this study's helpers acting in social domains other than courtship domains did not believe their pursuers' safety was particularly at risk. (For example, it is difficult to imagine how earning a bad grade in the academic domain or failing to finish cooking before guests arrive in the domestic domains could affect a person's safety.) Possibly, attempting romantic connections is an unusually dangerous social interaction, compared to the others reported here. Because these findings show that the defensive helpers in this study across domains are more attuned to their pursuers' safety and wellbeing, it may be that something about the act of helping people avoid an unwanted outcome triggers a sensitivity to pursuers' safety and wellbeing in ways pursuing desired goals do not. In fact, "defensive" might partly mean "protecting against danger."

Second, consistent with the study reported in Chapter 4, offensive helpers reported that their personal motivations to help pursuers achieve their goals ($M = 3.58$, $SD = 1.90$) were greater than defensive helpers' ($M = 2.62$, $SD = 1.85$) personal motivations ($t(397) = 2.50$, $p = .01$, Cohen's $d = 0.51$). Additionally, consistent with the study reported in Chapter 2, there were no statistically significant differences between how much of-

fensive and defensive helpers reported acting from dyadic and communal motivations (β to detect effects = .99). Additionally, the average offensive and defensive helper reported acting from a communal motivation at higher levels than the scale midpoint. Taken together, these findings suggest that, across social domains, offensive and defensive helpers helped their pursuers primarily out of a desire to benefit their pursuer and concern for creating or alleviating a debt through an exchange of equal value, even though offensive helpers seem to be more motivated to find personal gain by doing so.

Third, both the offensive and defensive helpers in this study reported mixed beliefs about their substitutability. There was no statistically significant difference in how offensive and defensive helpers believed that anyone could have helped their helpers. There was a difference that approached statistical significance ($p = .06$) in how much offensive and defensive helpers reported believing that their skills were more substitutable. Finally, there was a significant difference between how much offensive and defensive helpers reported believing that their willingness to help their pursuers was substitutable ($t(398) = 1.96$, $p = .05$, Cohen's $d = 0.40$), such that offensive helpers, more than defensive helpers, believed that their willingness to help their pursuers was more substitutable ($M = 4.59$ for offensive helpers; $M = 3.68$ for defensive helpers).

When considering these results together, a general pattern emerged: the offensive and defensive helpers in this study believed that they, as individuals, were moderately substitutable with other people and so were their skills. Offensive helpers, more than defensive helpers, reported believing that their willingness to help was substitutable. When considering this finding alongside how much offensive and defensive helpers acted from

communal motivations, suggests that defensive helpers' moderately strong motivation to help pursuers out of concern only for their pursuers' welfare and wellbeing was linked to their belief that it would be difficult to find others who were as willing to help as they. So, these findings suggest that measuring and controlling for relationship type and strength would be able to sharpen why the difference in strength of belief in willingness substitutability between offensive and defensive helpers exists.

Offensive and defensive helpers were undistinguished in how they thought they affected their pursuers' resources. Both offensive and defensive helpers reported believing that they moderately increased the resources their pursuers had access to, that they moderately increased the diversity of resources their pursuers could access, and that they helped their pursuers to a moderate degree make better use of their resources (β to detect effects = .99).

Now let us move to the question of helpers' effectiveness. Offensive and defensive helpers reported differences in perceptions of how successful their pursuers were and how effective they as helpers were, but no differences in what they did that led to their pursuers' success or their own. First, there were no statistically significant differences (β to detect effects = .99) in how well offensive and defensive helpers reported eliminating their pursuers' obstacles, decreasing their pursuers' obstacles, or showing their pursuers a new path around their obstacles. Nor was there a statistically significant difference in how much offensive and defensive helpers reported increasing the number of obstacles separating their pursuers from their goals.

This point is worth some discussion, given how defensive helpers are defined. De-

fenders help their pursuers avoid an undesirable goal. Defensive helpers could accomplish that by simply moving their pursuers farther away from the danger or they could accomplish that by putting obstacles between their pursuers and the potential difficulties. (An example of this second method comes from the study reported in Chapter 2. Several defensive helpers working for female pursuers physically put themselves in between their female pursuers and men on the dance floor who were dancing uncomfortably close to their pursuers.) The findings from this study indicate that not only did neither offensive nor defensive helpers increase the obstacles between their pursuers and their pursuers' threats, but that defensive helpers also declined to use the second method of putting obstacles between their pursuers and their pursuers' dangers to as defensive helpers.

Additionally,, offensive helpers reported stronger beliefs that their pursuers successfully achieved their goals ($t(398) = 2.55$, $p = .01$, Cohen's $d = .52$) and that they, as helpers, added utility to their pursuers' attempts to reach their goals ($t(398) = 2.18$, $p = .03$, Cohen's $d = 0.44$). Additionally, both offensive and defensive helpers reported moderately strong beliefs that their pursuers were successful and that that they themselves added utility to the pursuers' goal pursuit. Because there was no difference in how important offensive and defensive helpers perceived their pursuers' goals to be, the difference in offensive and defensive helpers' perceptions of achievement and utility do not seem to be the result of offensive helpers facing larger obstacles than defensive helpers. For the sake of statistical thoroughness, the size of offensive and defensive helpers' correlations of their perceptions of obstacle size and the two effectiveness variables was compared by converting the correlations into *Z* scores, comparing the size of those *Z* scores,

and finding out whether they were statistically significantly different. For the first pair of correlations, between perceived obstacle size and strength of belief that the pursuer achieved the goal, offensive helpers showed a small, statistically significant negative relationship ($r(374) = -.27$, $p < .001$), whereas there was no statistically significant correlation for defensive helpers ($r(26) = -.08$, $p = .68$). These correlations were not statistically significantly different ($Z = 0.9$, $p = .18$). For the second pair of correlations, between perceived obstacle size and strength of belief that the helper added utility to the pursuer's goal attempt, offensive helpers showed a small, statistically significant negative relationship ($r(374) = -.14$, $p = .009$), whereas there was no statistically significant correlation for defensive helpers ($r(26) = .10$, $p = .63$). These correlations were not statistically significantly different ($Z = 1.13$, $p = .13$). So, it is possible that these moderately strong beliefs about their pursuers' success and their own utility could be the result of processes that protect and/or bolster the ego via by reducing cognitive dissonance and/or increasing impression management. However, it may also be the case that the way in which offensive and defensive goals are conceptualized affects helpers' perceptions of success. Specifically, it may be easier for offensive helpers to judge when pursuers reach a goal than it is for defensive helpers to judge when a pursuer has sufficient distance between themselves and a goal they would like to avoid. If it is the case that the frames offensive and defensive helpers use to guide their actions make it easier for offensive helpers to judge their pursuers' success and their own utility, it may be the case that defensive helpers might report expending more effort over longer periods of time to help their pursuers reach their goals because defensive helpers would have to put in more effort over

longer periods of time to make sure that their pursuers are sufficiently clear of the goals they want to avoid. Another possibility is that these findings indicate pursuers' intelligent decisions about whom to ask to don the helper role and people's intelligent decisions about which helper roles to don and when. Future research should investigate these possibilities more..

Finally, it is important to note that there were no statistically significant differences between offensive and defensive on any of the personality variables measured in this study (self-esteem, need to belong, helping attitudes, the Big 5, and empathy). As far as the measures used here go, offensive and defensive catalysts were the same sorts of people. This suggests that offensive and defensive helpers may not be selected by pursuers for their particular personality traits. This initial, exploratory study, identified no statistically significant differences in offensive and defensive helpers' personality traits that measure general confidence in oneself based on perceptions of self-efficaciousness (self-esteem), that could be motivations for acting in prosocial ways in order to be in close, fulfilling relationships (need to belong), or that could indicate a general willingness to help others (helping attitudes and empathy).

To summarize: The helpers in this were mostly helped people reach their goals in the academic domain, and largely acted from communal motivations. Both offensive and defensive helpers endorsed their pursuers' goal(s) as important, but did not endorse their pursuers' wellbeing and safety goals with the same intensity. No sex differences were observed in whether participants were offensive and defensive helpers, but women were observed to endorse more strongly their pursuers' goals and safety-related goals. With this context presented, the tests of hypotheses and explorations of research questions are of-

fered next.

Hypotheses 1-3: Helpers' Effectiveness

The first set of hypotheses concerned the relationships among the six aspects of helper effectiveness measured in this study. A table of all the correlations among these variables may be found in Table 5.27.

Table 5.27

Correlations Among Effectiveness Variables

Variables	1	2	3	4	5
1. Effectiveness, Achieved	-				
2. Effectiveness, Perceived	0.59***	-			
3. Effectiveness, Eliminated	0.38***	0.26***	-		
4. Effectiveness, Decreased	0.37***	0.27***	0.69***	-	
5. Effectiveness, Increased	-0.13***	-0.38***	0.07	0.04	-
6. Effectiveness, New Path	0.16***	0.12**	0.26***	0.28***	0.10*

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Hypothesis 1 predicted positive relationships between helpers' perceived effectiveness and the degree to which they eliminated or decreased the obstacles their pursuers faced. There was a moderate positive correlation between helpers' perceptions of their own effectiveness and their perceptions that they eliminated the pursuers' obstacles, $r(400) = .26$, $p < .001$. There was also a positive correlation between helpers' self-perception of effectiveness and their success in *decreasing* the pursuers' obstacles, $r(400) = .27$, $p < .001$. Thus, Hypothesis 1 was supported.

Hypothesis 2 predicted a positive relationship between helpers' self-perceived effectiveness and perceptions that they helped pursuers achieve their goals. There was a strong positive correlation between perceptions of helpers' effectiveness and perceptions that the helpers *eliminated* the pursuers' obstacles, $r(400) = .59$, $p < .001$. "Eliminating" was a stronger effect than "decreasing" obstacles (*r*s were .27 and .59, respectively). Thus, Hypothesis 2 was supported.

Hypothesis 3 predicted negative relationships between perceptions that helpers increased the number of obstacles separating pursuers from their goals and those helpers' perceived and absolute effectiveness, all from the helpers' own reports. There was a substantial negative relationship between perceptions that they increased pursuers' obstacles and their perceived effectiveness, $r(400) = -.38$, $p < .001$. There was a weak negative relationship between perceptions that helpers increased pursuers' obstacles and helpers' perceived effectiveness, $r(400) = -.13$, $p < .001$. Thus, Hypothesis 3 was supported.

Hypotheses 4-6: Effects of Helpers on Pursuers' Resources

Hypotheses 4-6 predicted positive relationships among the three ways helpers can affect their pursuers' resources and perceptions of the helpers' effectiveness and success. Two structural equation models, one unmediated and one mediated (figures 3.2 and 3.3), were created to test these hypotheses.

The two-step approach for using structural equation modeling to test Hypotheses 4-6 recommended by Kline (2011) was used. This two-step approach requires that the measurement model be set before a structural model is used to test hypotheses. So, using Mplus 8.1, the first measurement model, a confirmatory factor analysis, was fit such that

all items were included, specified to load onto their factors as described above in the Method section, factors were allowed to covary, and disturbances were not allowed to covary. The results of the first confirmatory factor analysis indicated a suboptimal reproduction of the sample variance-covariance matrix (χ^2 (17,300, N = 400) = 32,986.47, p < .001, SRMR = .07, RMSEA = .05 with 90% confidence interval [.05, .05], CFI = .69, AIC = 330,293.95). Modification indices indicated that removing two cross-loaded items (one from obstacle size and one from the Openness subscale of the Big 5 Personality Index) would improve the fit of the measurement model. These items were removed, and the measurement model was tested a second time. The second attempt's reproduction of the sample variance-covariance matrix was improved, but still suboptimal (χ^2 (16,925, N = 400) = 32,370.75, p < .001, SRMR = .07, RMSEA = .05 with 90% confidence interval [.05, .05], CFI = .70, AIC = 326,218.90). Modification indices were again inspected. A further six cross-loaded items (four from created scales, two from established personality scales) were eliminated, and the measurement model was fit a third and final time. Again, the fit improved, and approached more optimal fit (χ^2 (14,240, N = 400) = 26,768.29, p < .001, SRMR = .07, RMSEA = .05 with 90% confidence interval [.05, .05], CFI = .73, AIC = 296,621.50).

Figure 5.2 Unmediated Structural Equation Model of Hypotheses 4-6 about Beliefs about How Helpers Affect Pursuers' Resources and Perceptions of Helpers' Success and Effectiveness

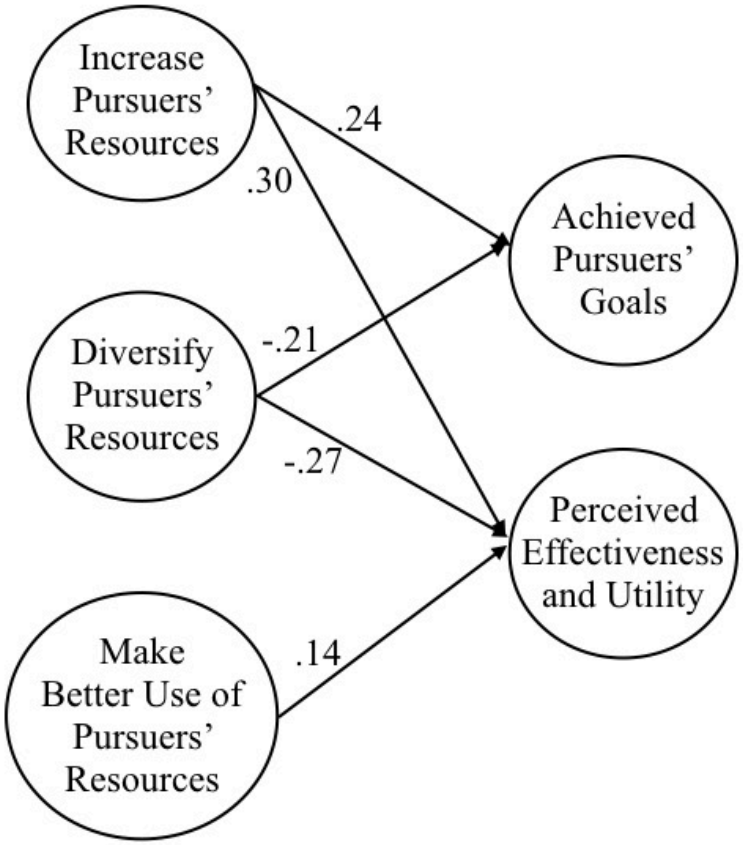

Figure 5.2. An unmediated structural equation model of Hypotheses 4-6 about three ways helpers can affect pursuers' resources and perceptions of helpers' success and effectiveness. Only statistically significant (at $p < .05$) structural paths among factors are shown; additional information about the indicators may be found in Chapter 3's Method section. All path estimates are standardized estimates. χ^2 (179) = 683.78, $p < .001$, SRMR = .06, RMSEA = .08 with 90% confidence interval [.07, .09], CFI = .93, AIC = 31,333.78, Achievement R^2 = .03, Effectiveness R^2 = .06.

Figure 5.3 Mediated Structural Equation Model of Hypotheses 4-6 about Beliefs about How Helpers Affect Pursuers' Resources and Perceptions of Helpers' Success and Effectiveness

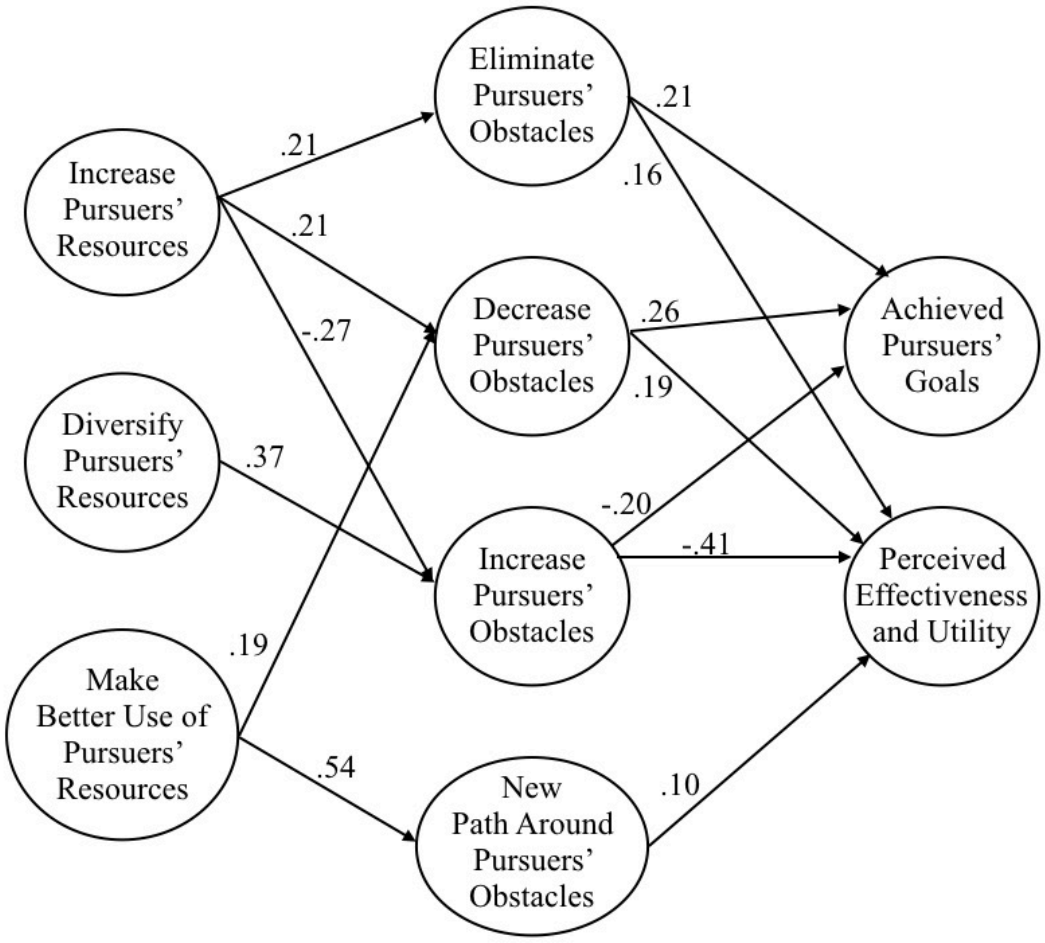

Figure 5.3. An unmediated structural equation model of Hypotheses 4-6 about three ways helpers can affect pursuers' resources and perceptions of helpers' success and effectiveness. Only statistically significant (at $p < .05$) structural paths among factors are shown; additional information about the indicators may be found in Chapter 3's Method section. All path estimates are standardized estimates. χ^2 (471) = 1,470.47, $p < .001$, SRMR = .09, RMSEA = .07 with 90% confidence interval [.07, .08], CFI = .91, AIC = 49,710.62, Achievement R^2 = .17, Effectiveness R^2 = .25.

At this point, it was decided that eliminating any further items to improve fit would be capitalizing on chance, and that the measurement model, while imperfect, was tolerable (Ding, Velicer, & Harlow, 1995). Therefore, I proceeded to the hypothesis tests.

The hypotheses concerned unmediated models. Mediated models were also tested to clarify the relationships tested in the unmediated model. Mplus 8.4 was used to analyze the unmediated and mediated models. None of the indicators was allowed to cross-load onto other factors, nor were disturbances nor indicator errors were allowed to covary. The three exogenous factors, which were allowed to covary, concerned how helpers affected their pursuers' resources: increase pursuers' resources, diversify pursuers' resources, and help pursuers make better use of their resources. The unmediated model had two endogenous outcome factors: the degree to which helpers believed their pursuers successfully achieved their goal and helpers' perceptions that they were effective and added utility to their pursuers' goal pursuit. The mediated model used these same two endogenous factors as outcome factors and added a panel of mediating variables between the unmediated model's exogenous resources panel and its endogenous success and efficacy panel. The mediating panel of variables in the mediated model were four factors that specified helper behavior that could help or hinder their pursuers' successfully attaining or failing to attain their goal: perceptions that the helper eliminated the obstacle(s) keeping pursuers from their goals, perceptions that the helper decreased the size or number of obstacle(s) keeping pursuers from their goals, increasing the obstacle(s) keeping pursuers from their goals, and showing their pursuers a new path around the obstacle. Maximum likelihood estimation was used.

Hypothesis 4-6 predicted that increasing the number of resources pursuers could access (Hypothesis 4), improving the diversity of resources pursuers could access (Hypothesis 5), and showing pursuers how to make better use of their resources (Hypothesis

6) would all increase perceptions that helpers were effective and helped pursuers overcome the obstacle(s) separating them from their goals. As described above, an unmediated and a mediated structural model were created to test each hypothesis.

Fit indices showed that unmediated model designed to test Hypotheses 4-6 (Fig. 3.2) was a plausible way to recreate the sample variance-covariance matrix (χ^2 (179) = 683.78, $p < .001$, SRMR = .06, RMSEA = .08 with 90% confidence interval [.07, .09], CFI = .93, AIC = 31,333.78). The unmediated model, however, explained little variance in the two outcome factors (pursuers' achieved their goals $R^2 = .03$, helper was effective $R^2 = .06$). Fit indices showed that mediated model (Fig. 3.3) was, by some measures, a more plausible way to recreate the sample variance-covariance matrix than the unmediated model (χ^2 (471) = 1470.47, $p < .001$, SRMR = .09, RMSEA = .08 with 90% confidence interval [.07, .08], CFI = .91, AIC = 49,710.62).

The mediated model explained quite a bit more variance in the two outcome factors (pursuers' achieved their goals $R^2 = .17$, helper was effective $R^2 = .25$). A χ^2 difference test was conducted to determine whether adding the mediators made a statistically significant difference. Muthén and Muthén (2010) specified that when models used maximum likelihood estimation, a standard χ^2 difference test should be conducted instead of a χ^2 difference test that accounts for the mean-adjusted Satorra-Bentler χ^2 statistic Mplus calculates and outputs when some other estimators are used. The results of the χ^2 difference test (χ^2 (292) = 786.62, $p < .001$) indicated that the additional parameters in the me-

diated model yielded a significantly better model. Although the additional parameters of the mediated model improve an absolute measure of how well the model fits the data and increase the amount of variance explained in the outcome factors, the mediated model has, compared to the unmediated model, poorer incremental and parsimonious fit statistics. Therefore, this author finds the mediated model a more plausible model than the the unmediated model and will base the following hypothesis tests on the mediated model (Figure 5.3)

Hypotheses 4a and 4b predicted that helpers who believed that they increased the number of resources available to their pursuers would report greater perceptions that their pursuers achieved their goals and that they themselves were effective in helping their pursuers achieve their goals. Both predictions were confirmed. Helpers' perceptions that they increased their pursuers' resources had positive effects on their success and their perceived utility through the mediating variables of eliminating and decreasing their pursuers' obstacles. Helpers' perceptions that they increased their pursuers resources had a positive effect on the outcome variables through a negative path to increasing pursuers' obstacles and from negative paths from increasing pursuers' obstacles to the outcome variables of interest. Thus, Hypotheses 4a and 4b were supported.

Hypotheses 5a and 5b predicted that helpers who believed that they increased the diversity of resources available to their pursuers would report greater perceptions that their pursuers achieved their goals and that they themselves were effective in helping their pursuers achieve their goals. The structural model designed to test these hypotheses showed a statistically significant effect in the opposite direction. Helpers reported a posi-

tive moderate direct effect of diversifying pursuers' resources on perceptions that they increased their pursuers' obstacles ($\lambda = 0.37$, $p < .05$). There were negative paths from increasing pursuers' obstacles to the two outcome variables of interest. These findings suggest that helpers did not believe that diversifying their pursuers' resources was a strategy effective helpers would pursue because they led to more obstacles for their pursuers. Thus, Hypotheses 5a and 5b were not supported in the direction predicted.

Hypotheses 6a and 6b predicted that helpers who believed that they helped their pursuers make better use of the resources available to them would report greater perceptions that their pursuers achieved their goals and that helpers were themselves effective in helping their pursuers achieve their goals. Hypothesis 6a and 6b were confirmed: There was statistically significant, positive indirect effects of helpers' beliefs that they helped pursuers make better use of their resources on perceptions that their pursuers achieved their goals and on perceptions their own effectiveness through the mediating variables of decreasing pursuers' obstacles and showing pursuers a new path around their obstacles. These findings suggest that when the helpers in this study showed their pursuers how to make better use of their existing resources, helpers are aware that they are not eliminating their pursuers' obstacles. Rather, these helpers seem to believe that benefit of this resource-improvement approach is that it shrinks their pursuers' obstacles enough to make them surmountable and that it helps their pursuers see new possibilities for goal-relevant action. Thus, the hypotheses concerning helpers showing their pursuers how to make better use of existing resources received mixed support.

Hypotheses 7 and 8: Effects of Helpers' Substitutability

Hypotheses 7 and 8 are competing hypotheses offered at the conclusion of two different lines of analyses about the possible relationship between helpers' perceptions of their own substitutability and their perceptions of their effectiveness and success. Hypothesis 7 predicted that the more non-substitutable a social domain, the less the perceptions of effectiveness and success will be, whereas Hypothesis 8 predicted that The more the non-substitutable a social domain, the greater the perceptions of effectiveness and success will be. Two structural equation models, one unmediated and one mediated (figures 3.4 and 3.5), were created to test these hypotheses.

Figure 5.4 Unmediated Structural Equation Model of Hypotheses 7 and 8 about Helpers' Beliefs about Substitutability and Perceptions of Their Success and Effectiveness

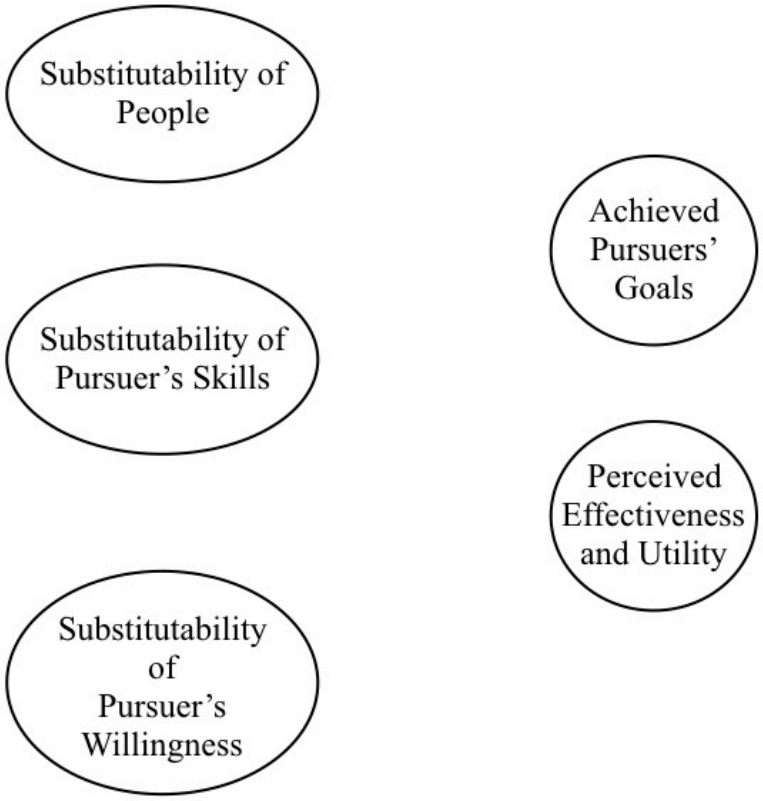

Figure 5.4. An unmediated structural equation model of Hypotheses 7 and 8 about three perceptions helpers can have about their substitutability and how those perceptions and helpers' perceptions of their success and effectiveness. Only statistically significant (at $p < .05$) structural paths among factors are shown; additional information about the indicators may be found in Chapter 3's Method section. No path coefficients were statistically significant at $p < .05$.. χ^2 (199) = 818.04, $p < .001$, SRMR = .06, RMSEA = .09 with 90% confidence interval [.08, .10], CFI = .90, AIC = 33,925.89, Achievement R^2 = .01, Effectiveness R^2 = .02.

Figure 5.5 Mediated Structural Equation Model of Hypotheses 7 and 8 about Helpers' Beliefs about Substitutability and Perceptions of Their Success and Effectiveness

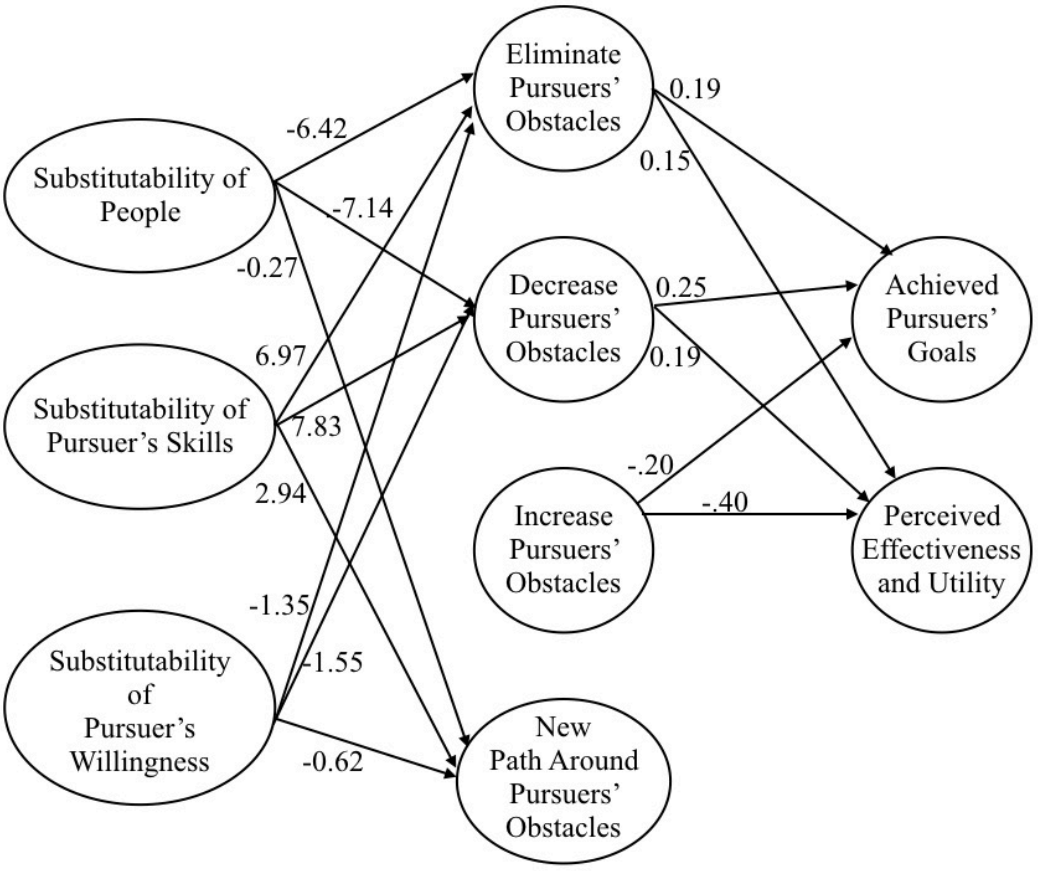

Figure 5.5. A mediated structural equation model of Hypotheses 7 and 8 about three perceptions helpers can have about their substitutability and how those perceptions and helpers' perceptions of their success and effectiveness. Only statistically significant (at $p < .05$) structural paths among factors are shown; additional information about the indicators may be found in Chapter 3's Method section. All path estimates are standardized estimates. χ^2 (503) = 1402.34, $p < .001$, SRMR = .06, RMSEA = .07 with 90% confidence interval [.06, .07], CFI = .92, AIC = 52, 219.74, Achievement R^2 = .21, Effectiveness R^2 = .27.

As with Hypotheses 4-6 described above, Hypotheses 7 and 8 concerned the unmediated model; the mediated model was tested to clarify the relationships described in the unmediated model. There were three exogenous substitutability factors: helpers' perceptions of how substitutable people were (higher scores meant that helpers believed

more strongly that anyone could help their pursuers), helpers' perceptions of how substitutable their skills were (higher scores meant that helpers believed more strongly that many people had the skills their pursuers required), and helpers' perceptions of how substitutable their willingness to help their pursuers was (higher scores meant that helpers believed more strongly that others would be willing help their pursuers). The mediating and outcome factors were the same as those in the models used to test Hypotheses 4-6. The procedures and decisions used to define and test the two models for Hypotheses 7 and 8 are the same procedures described in the prior section to define and test the unmediated and mediated models of Hypotheses 4-6. So, for brevity, those decisions will not be described again in this section.

Fit indices showed that unmediated model (Fig. 3.4) was a plausible way to recreate the sample variance-covariance matrix, χ^2 (199) = 818.04, $p < .001$, SRMR = .06, RMSEA = .09 with 90% confidence interval [.08, .10], CFI = .90, AIC = 33,925.89. However, the unmediated model explained nearly no variance in the two outcome factors (pursuers' achieved their goals $R^2 = .01$, helper was effective $R^2 = .02$). Fit indices showed that the mediated model (Fig. 3.5) was a more plausible way to recreate the sample variance-covariance matrix than the unmediated model, χ^2 (503) = 1402.34 $p < .001$, SRMR = .06, RMSEA = .07 with 90% confidence interval [.06, .07], CFI = .92, AIC = 52, 219.74. The mediated model also explained a noticeable amount of variance in the outcome factors (Achievement $R^2 = .21$, Effectiveness $R^2 = .27$). A χ^2 difference test was performed to offer additional information about which model to retain. The results of the

χ^2 difference test (χ^2 (304) = 584.30, $p < .001$) indicated that the additional parameters in the mediated model yielded a statistically significantly better model. Additionally, the measures of incremental and parsimonious fit indicate that the mediated model fits the data better than the unmediated model. Therefore, the mediated model will be retained and used to test Hypotheses 7 and 8.

Hypotheses 7 and 8 were competing predictions about the effects of helpers' perceived substitutability on perceptions that their pursuers achieved their goals and that they themselves were effective in helping their pursuers achieve their goals. These hypotheses received mixed support (see Figure 5.5). Only two of the four mediating factors were directly affected by the three exogenous factors and also directly affected the two outcome variables: eliminating pursuers' obstacles and decreasing pursuers' obstacles. Helpers' perceptions that they increased pursuers' obstacles negatively affected the two outcome variables, but this latent variable was itself not directly affected by the hypothesized substitutability factors. In contrast, helpers' perceptions that they showed pursuers a new path around their obstacles was directly and statistically significantly predicted by the three exogenous substitutability factors but did not itself statistically significantly predict the two outcome factors.

That leaves the two remaining mediating factors, helpers' perceptions that they eliminated the pursuers' obstacles and helpers' perceptions that they decreased the pursuers' obstacles, which were both directly predicted by the three exogenous substitutability factors and directly predicted the two endogenous outcome factors, helpers' perceptions that their pursuers achieved their goals and that the helpers themselves were effec-

tive in helping their pursuers achieve their goals. Two substitutability factors (for people and motivation) exerted *negative* indirect effects on the outcome variables through the mediating factors of helpers' perceptions that they eliminated and decreased pursuers' obstacles. These negative mediated effects mean that, when mediated through helpers' perceptions that they eliminated or decreased their pursuers' obstacles, the less helpers believed that anyone could help their pursuers and that anyone would be willing to help their pursuers, the more they reported believing that their pursuers achieved their goals or that the helpers were themselves effectively helped their pursuers do so.

The third substitutability factor (skills) exerted statistically significant *positive* indirect effects on the outcome variables through the mediating factors of helpers' perceptions that they eliminated and decreased pursuers' obstacles. These positive mediated effects mean that, when mediated through helpers' perceptions that they eliminated or decreased their pursuers' obstacles, the more helpers believed that anyone had the skills to help their pursuers, the more they reported believing that their pursuers achieved their goals or that the helpers were themselves effectively helped their pursuers do so.

Hypothesis 10: Relationship Between Domain and Helpers' Motivations

Hypothesis 10 predicted that the proportion of offensive and defensive helpers acting from each motivation will be different across social domains. Because this hypothesis predicts a binary outcome (offensive or defensive helper), a logistic regression was conducted. This section will first briefly describe logistic regression, then the equation used to test Hypothesis 10, and, finally, the results of that test.

Logistic regression (Hosmer & Lemeshow, 2000; O'Connell, & Amico, 2009;

Tabachnick & Fidell, 2013) is similar to multiple linear regression, but is used when predicting a binary outcome variable with a distribution presumed to be $Y_i \sim B(1, \pi_i)$, where B is the binomial Bernoulli distribution, 1 is the number of responses each participant provides, and π_i is the probability of success (in this case, being an offensive helper) for the i^{th} participant. The nature of the binary dependent variable violates the assumptions of normality and homoscedastic errors required for inferential multiple linear regression (Hanushek & Jackson, 1974), so the values must be transformed from the linear function of multiple linear regression (eq. 1) to a more appropriate form. The logit link function makes that transformation (eq. 1). *Logits* are units that represent the natural log odds of success; in this case, being an offensive helper and may take any positive or negative number.

$$\eta_i = \text{logit}(\pi(x_i)) = \beta_0 + \beta 1 X_{i1} + \beta_2 X_{i2} + \ldots + \beta_n X_{in} + e. \quad \text{(eq. 1)}$$

The predictor variables are the domain in which helpers assisted pursuers, the three motivations helpers could have acted from (personal, dyadic, and communal), and three interaction terms representing the interaction of each motivation with the domain. Thus, the resulting logistic regression conceptual equation (eq. 2) used to test Hypothesis 10 is:

$$\eta_i = \beta_0 + \beta 1(\text{Academic}) + \beta 2(\text{Professional}) + \beta 3(\text{Academic}) + \beta 4(\text{Domestic}) + \beta 5(\text{Physical Health}) + \beta 6(\text{Emotional and/or Mental Health}) + \beta 7(\text{Service}) + \beta 8(\text{Social}) + \beta 9(\text{Athletic}) + \beta 10(\text{Romantic}) + \beta 11(\text{Other}) + \beta 12(\text{Creative}) + \beta 13(\text{Travel}) + \beta 14(\text{Technological}) + \beta 15(\text{Personal Motivation}) + \beta 16(\text{Dyadic Motivation}) + \beta 17(\text{Communal Motivation}) + \beta 18(\text{Domain * Personal}) + \beta 18(\text{Domain * Dyadic}) + \beta 2\text{-}(\text{Domain * Communal}) + e. \quad \text{(eq. 2)}$$

In logistic regression, regression coefficients may be interpreted the indicating the change in logit given a one-unit change in the regression coefficient. Another, perhaps simpler interpretation of the regression coefficients is the *odds ratio*. Odds ratios are created by raising *e* to the regression coefficient (e.g., $e^{\beta n}$). An odds ratio of 1 has no effect on the chances of the outcome occurring; an odds ratio greater than 1 increases the chances of the outcome occurring and an odds ratio less than 1 decreases the chances of the outcome occurring. An odds ratio of 2 associated with a particular predictor variable, then, means that a one-unit increase in the predictor doubles the chances of the outcome occurring, holding all other predictors constant; An odds ratio of 0.50 associated with a different predictor variable means that a one-unit increase in the predictor variable halves the chances of the dependent variable occurring, holding all other predictors constant.

The logistic regression equation specified in eq. 2 was used to test Hypothesis 10. The Hosmer-Lemeshow test showed that the model fit the data acceptably ((χ^2 (8) = 1.89, p = .98)). Additionally, this model's Nagelkerke R^2, which is an analog for the multiple linear regression R^2 that has been adjusted for the binary outcome variable, showed that the predictors explained a modest amount of variance (Nagelkerke R^2 = .33) when predicting whether a participant would be an offensive or defensive helper. The model correctly classified 94% of helpers as offensive or defensive helpers. This seems like a rather impressive classification rate until one observes that the null model (the model with only an intercept and no predictors) correctly classified 93.5% of helpers and that not one of the predictors was statistically significant. A clue to these results is in the percentage of the sample that were offensive helpers: 93.5%. Thus, it appears that the logistic regres-

sion model specified in eq. 2 failed to correctly classify any participants as defensive helpers.

Binary logistic regression has a difficult time predicting binary outcome variables in which one outcome is dozen or more times more frequent than the other (King & Zeng, 2001). The rare events in this data set are the occurrence of defensive helpers, which were 6.5% of the data set (compared to the 39.84% defensive helpers comprised in the Study 1 data set about helpers in the courtship domain). This percentage was unexpected. As stated above, part of the rationale for Study 2 was to explore whether social catalysts occurred in domains other than courtship and, if so, to learn in what domains social catalysts operate in, how they operate in those domains, and in what proportions. So, based on the exploratory nature of this study and based on information from Study 1 that was of limited predictive utility in this study, it was unforeseen that defensive helpers would be rare events, so the sampling methods King and Zeng (2001) described to minimize the statistical problems associated with rare events could not be performed. Thus, there was inadequate information to test Hypothesis 10.

Hypotheses 11: Effects of Helpers' Motivations

Hypothesis 11 concerns the effect of helpers' motivations on their perceptions of their effectiveness and success: Helpers acting from personal motives will be perceived as less effective and successful than helpers acting from dyadic or personal concerns. Two structural equation models, one unmediated and one mediated (figures 3.6 and 3.7, were created to test this hypothesis.

Figure 5.6 Unmediated Structural Equation Model of Hypothesis 11 about Helpers' Motivations and Perceptions of Their Success and Effectiveness

Figure 5.6. An unmediated structural equation model of Hypothesis 11 about the effects of helpers' motivations on perceptions and helpers' perceptions of their success and effectiveness. Only statistically significant (at $p < .05$) structural paths among factors are shown; additional information about the indicators may be found in Chapter 3's Method section. All path estimates are standardized estimates. χ^2 (289) = 1,162.96, $p < .001$, SRMR = .10, RMSEA = .09 with 90% confidence interval [.08, .09], CFI = .86, AIC = 41,425.78, Achievement R^2 = .02, Effectiveness R^2 = .07.

Figure 5.7 Mediated Structural Equation Model of Hypothesis 11 about Helpers' Motivations and Perceptions of Their Success and Effectiveness

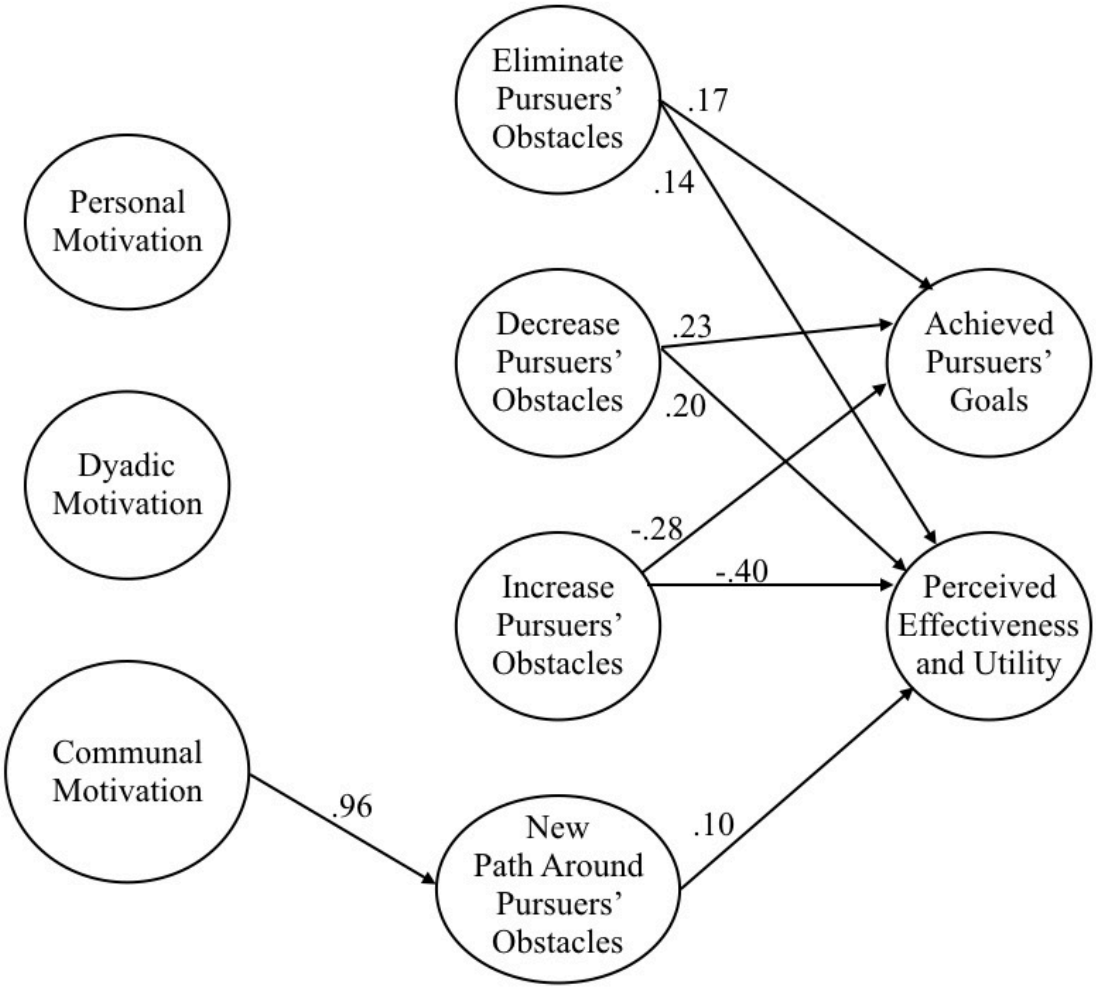

Figure 5.7. A mediated structural equation model of Hypothesis 11 about the effects of helpers' motivations on perceptions and helpers' perceptions of their success and effectiveness. Only statistically significant (at $p < .05$) structural paths among factors are shown; additional information about the indicators may be found in Chapter 3's Method section. All path estimates are standardized estimates. χ^2 (703) = 11,465.51 $p < .001$, SRMR = .08, RMSEA = .07 with 90% confidence interval [.07, .07], CFI = .89, AIC = 59,744.95, Achievement R^2 = .21, Effectiveness R^2 = .27.

As with Hypotheses 4-8 described above, Hypothesis 11 concerned the unmediated model; the mediated model was tested to clarify the relationships described in the un-

mediated model. There were three exogenous motivation factors: how much helpers reported helping their pursuers from personal, dyadic, and communal motivations. Helpers acting from personal motivations do so primarily to satisfy their own desires; any benefit their pursuers may derive is secondary to the helpers' own needs and desires. Helpers acting from a dyadic motivation do so satisfy an existing debt or to create for their a pursuers a new obligation to be repaid in the future. Helpers acting from communal motivation do so primarily to maintain or increase their pursuers' wellbeing, comfort, welfare, and safety. The mediating and outcome factors were the same as those in the models used to test Hypotheses 4-8. The procedures and decisions used to define and test the two models for Hypothesis 11 are the same procedures described in the prior sections to define and test the unmediated and mediated models of Hypotheses 4-8.

Fit indices showed that unmediated model (Fig. 3.6) was not a particularly plausible way to recreate the sample variance-covariance matrix, χ^2 (289) = 1,162.96, $p < .001$, SRMR = .10, RMSEA = .09 with 90% confidence interval [.08, .09], CFI = .86, AIC = 41,425.78. The unmediated model explained very little variance in the two outcome factors (pursuers' achieved their goals $R^2 = .02$, helper was effective $R^2 = .07$). Fit indices showed that mediated model (Fig. 3.7) was a more plausible way to recreate the sample variance-covariance matrix than the unmediated model, χ^2 (703) = 11,465.51 $p < .001$, SRMR = .08, RMSEA = .07 with 90% confidence interval [.07, .07], CFI = .89, AIC = 59,744.95. The mediated model also explained a modest amount of variance in the outcome factors (Achievement $R^2 = .21$, Effectiveness $R^2 = .27$). A χ^2 difference test was

performed to offer additional information about which model to retain. The results of the χ^2 difference test (χ^2 (414) = 10,300.55, $p < .001$) indicated that the additional parameters in the mediated model yielded a statistically significantly better model. Additionally, the measures of incremental and parsimonious fit indicate that the mediated model fit the data better than the unmediated model. Therefore, the mediated model will be retained and used to test Hypothesis 11.

Hypotheses 11 predicted that helpers acting from personal motivations, as opposed to acting from dyadic or communal motivations, would be perceived as less successful and effective. This hypothesis was supported, but more or less by default (see Figure 5.7). The only motivation that was importantly involved in the variable system was communal, and personal motivation did not register with any significant paths. Only one of the four endogenous mediating factors (helpers' perceptions that they showed pursuers a new path around the obstacle) was directly affected by the motivational factors (only communal, in fact) and directly affected an outcome variable. The presence of the path Communal → New Path → Perceived Effectiveness supports the hypothesis when contrasted with the failure of personal motivations to affect any of the downstream variables.

Some other findings in this model were interesting. Helpers' perceptions that they eliminated or decreased pursuers' obstacles positively affected the two outcome variables, but were not themselves affected by the exogenous motivation factors. Similarly, helpers' perceptions that they increased pursuers' obstacles negatively affected the two outcome variables, but was not affected by the exogenous motivation factors. Only the communal

motivation factor exerted a statistically significant indirect effect on helpers' perceptions of their own effectiveness through the mediating factor of helpers' perceptions that they showed pursuers a new path around an obstacle. Specifically, when mediated through helpers' perceptions that they showed pursuers a new path around the obstacles separating them from their goals, the more helpers reported acting from a communal motivation, the more they reported that they were effective. This mediated relationship did not exist for perceptions that their pursuers achieved their goals. Thus, because there were no statistically significant mediated paths from helpers' personal motivations to any of the mediating variables and because there was such a path from communal motivation, Hypothesis 11 was supported.

Research Questions 1A, 1B, 1C: How Helpers Improve Pursuers' Resources

The first three research questions concerned how helpers improve their pursuers' resources. A line of analysis in an earlier section of this paper suggested that helpers helped their pursuers overcome obstacles separating them from their goals by increasing the number of resources their pursuers had access to, by increasing the diversity of resources their pursuers could access and use, and by showing their pursuers a more effective way to use their resources they already had. Here, this analysis is elaborated, using coding of respondents' free responses. These research questions were designed to illuminate how helpers reported affecting their pursuers' resources and, as such, are intended to offer nuance to the quantitative measures included in earlier analyses. As described in the Method section, participants' free responses were coded for the type of social support helpers reported providing to their pursuers. The ways in which helpers reported affecting

pursuers' resources were counted nonexclusively, which means that if helpers reported affecting their pursuers' resources using two different strategies, each strategy was counted. The number of ways in which helpers reported affecting pursuers' resources was not counted, which means that if a pursuer reported using the same strategy twice, that strategy was counted only once.

Before discussing each of the specific strategies helpers reported using to affect their pursuers' resources, this paper will present three general observations about these findings that cut across the research questions. First, helpers in this study ($N = 399$) most frequently reported improving the diversity of their pursuers' resources ($n = 320$, 80.2%), although increasing the quantity or amount of their pursuers' resources was also common ($n = 298$, 74.69%). Helping pursuers make better use of their existing resources was reported least frequently ($n = 61$, 15.29%) as a resource-improvement strategy by participants in this study. Second, only two helpers (less than 1% of the sample) did not describe affecting their pursuers' resources at all. Third, the greatest variety of strategies participants reported using involved improving the diversity of resources their helpers could access. Participants reported using twenty different social support strategies to improve the diversity of their pursuers' resources (55.56%), ten (27.78%) to increase the number of their pursuers' resources, and six (16.67%) to show their pursuers how to make better use of their resources. Across the three resource-improvement strategies, information social support strategies, either alone or in combination with other strategies, appeared in half of the social support strategies ($n = 18$, 50%) and was reported as the most frequently used social support strategy by the helper-respondents. Tangible social

support, either alone or in combination, was the second most frequently reported resource-improvement strategy (n = 15, 41.67%), and esteem social support, either alone or in combination, was the third most frequently reported resource-improvement strategy (n = 14, 38.89%). Network social support, either alone or in combination with other resource-improvement strategies, was the strategy least frequently reported by helpers in this study (n = 8, 22.2%).

The first research question about how helpers affect pursuers' resources was: How do helpers increase the number of resources available to pursuers? Increasing the number of resources was conceptualized as helpers increasing the quantity or amount of resources pursuers already had available to them. For example, if a pursuer is attempting to bake a loaf of bread and had only 600g of the 750g of bread flour required, a helper could increase the pursuer's resources by providing the additional 150g of bread flour required for the recipe. Most helpers in this study (n =298, 74.68%; Table 5.28) reported increasing their pursuers' resources, and most of those helpers reported doing so by providing their pursuers informational social support (n = 101, 73.82%). A clearer picture of how frequently the helpers in this study reported using informational social support to increase their pursuers' resources emerges when seeing how many helpers reported using informational social support in combination with other types of social support. Of the twelve single and combination social-support strategies, five (41.67%) included informational social support, and a total of 261 (87.58%) of helpers in this study who reported increasing the number of resources their pursuers had access to using informational social support alone or in combination with other strategies of social support. It is also important to note

that no helper reported using emotion or network social support strategies, and that only five helpers (1.26%) reported using emotion or network strategies in combination with other social-support strategies. Finally, an additional analysis indicated there was no difference in how frequently offensive and defensive helpers reported using social support strategies to increase their pursuers' resources ((χ^2 (10) = 4.26, p = .94).

Table 5.28

Research Question 1A: The s Social Support Strategies Offensive and Defensive Helpers Reported Using to Increase the Number of Pursuers' Resources

Social Support Strategy Reported	Type of Helper		Total
	Offensive *n* (Row%)	Defensive *n* (Row%)	
None	96 (95.05%)	5 (4.95%)	101
Information	201 (91.36%)	19 (8.64%)	220
Esteem	2 (100%)	0 (0%)	2
Tangible	41 (97.6%)	1 (2.4%)	42
Emotion	0	0	0
Network	0	0	0
Information, Esteem	2 (100%)	0 (0%)	2
Information, Tangible	23 (95.83%)	1 (4.17%)	24
Information, Emotion	3 (100%)	0 (0%)	3
Esteem, Tangible	2 (100%)	0 (0%)	2
Esteem, Emotion	1 (100%)	0 (0%)	1
Tangible, Network	1 (100%)	0 (0%)	1
Information, Emotion, Tangible	1 (100%)	0 (0%)	1

χ^2 (10, N = 399) = 4.26, p = .94

The second research question about how helpers affect pursuers' resources was: How do helpers increase the diversity of resources available to pursuers? Increasing the diversity of resources was conceptualized as helpers increasing the quantity or amount of resources pursuers did not already have access to. To continue the baking example: If a pursuer were attempting to bake a loaf of bread and did not have any of the yeast required for the loaf, a helper could increase the diversity of the pursuer's resources by providing the yeast required for the recipe. As with the other resource-improvement strategies, helpers most frequently reported providing information social support (n =85, 21.30%; Table 5.29) and in combination (an additional n = 113, 28.32%) to improve the diversity of their pursuers' resources. Unlike the other resource-improvement strategies, helpers reported the other social-support strategies, alone and in combination, as being nearly as common resource-improvement strategies as the information strategy. Notably, the tangible strategy was reported alone or in combination nearly as often the information strategy (n = 153, 38.54%). And, unlike for the other resource-improvement strategies, the helpers in this study reported providing more than nominal esteem (n = 70, 17.54%) and emotional (n = 42, 10.53%) strategies to their pursuers to help them diversify their resources. This finding suggests that helpers believed they provided motivational and emotional support that their pursuers were unable to access without them. An additional analysis revealed that there was no difference in how frequently offensive and defensive helpers reported using social support strategies to improve the diversity of their partners' resources ((χ^2 (20) = 21.0, p = .94).

Table 5.29

Research Question 1B: The Social Support Strategies Offensive and Defensive Helpers Reported Using to Improve the Diversity of Pursuers' Resources

Social Support Strategy Reported	Type of Helper		Total
	Offensive *n* (Row%)	Defensive *n* (Row%)	
None	77 (97.47%)	2 (2.53%)	79
Information	80 (94.12%)	5 (5.88%)	85
Esteem	17 (94.44%)	1 (5.56%)	18
Tangible	48 (90.57%)	5 (9.43%)	53
Emotion	8 (100%)	0 (0%)	8
Network	4 (100%)	0 (0%)	4
Information, Esteem	15 (100%)	0 (0%)	15
Information, Tangible	51 (94.44%)	3 (5.56%)	54
Information, Emotion	10 (90.91%)	1 (9.09%)	11
Information, Network	9 (100%)	0 (0%)	9
Esteem, Tangible	6 (85.71%)	1 (14.29%)	7
Esteem, Emotion	7 (77.78%)	2 (22.22%)	9
Esteem, Network	2 (100%)	0 (0%)	2
Tangible, Network	11 (91.67%)	1 (8.33%)	12
Tangible, Emotion	5 (83.33%)	1 16.67%)	6
Information, Emotion, Tangible	6 (85.71%)	1 (14.29%)	7
Information, Emotion, Esteem	1 (50%)	1 (50%)	2
Information, Network, Esteem	3 (100%)	0 (0%)	3
Information, Tangible, Esteem	9 (81.82%)	2 (18.18%)	11
Information, Network, Emotion	1 (100%)	0 (0%)	1
Network, Tangible, Esteem	3 (100%)	0 (0%)	3

χ^2 (20, N = 399) = 21.0, p = .40

The third and final research question about how helpers affect pursuers resources was: How do helpers improve pilots' ability to use resources? To continue the baking example from the earlier research questions: If a pursuer were baking a loaf of bread and had successfully combined the ingredients but could not manage to knead the dough well by hand, a helper could show the pursuer how to make better use of his/her existing resources by showing him/her how to use a stand mixer to knead her dough. Most helpers (n = 339, 84.75%; Table 5.30) reported that they did not help their pursuers make better use of their resources. Of the sixty-one helpers who did help their pursuers make better use of their resources, most (n = 52, 85.25%) reported using an information strategy (n = 47, 77.05%) or combining information with other strategies (n = 5, 8.20%). There was a statistically significant difference in how frequently offensive and defensive helpers reported using strategies to help their pursuers make better use of their resources ($\chi^2(6, N = 400) = 16.8$, $p = .01$, Cramer's $V = .21$). A closer inspection of the frequencies reveals that two more offensive helpers than expected reported not using any such strategy, two fewer defensive helpers than expected reported not using any such strategy, and two more defensive helpers than expected reported using an information strategy.

Table 5.30

Research Question 1C: The Social Support Strategies Offensive and Defensive Helpers Reported Using to Help Pursuers Make Better Use of Their Resources

Social Support Strategy Reported	Type of Helper		Total
	Offensive *n* (Row%)	Defensive *n* (Row%)	
None	319 (94.10%)	20 (5.90%)	339
Information	42 (89.36%)	5 (10.64%)	47
Esteem	1 (100%)	0 (0%)	1
Tangible	7 (100%)	0 (0%)	7
Emotion	0	0	0
Network	0	0	0
Information, Tangible	4 (100%)	0 (0%)	4
Information, Emotion	0 (0%)	1 (100%)	1
Esteem, Emotion	1 (100%)	0 (0%)	1

χ^2 (6, N = 400) = 16.8, p = .01, Cramer's V = .21

Research Questions 3 and 4: Helpers Attending to Aspects of Pursuers' Wellbeing and Safety

Arguments in the first section of this paper and findings from the first study suggested that helpers acting from communal motivations and defensive helpers both attend to their pursuers' safety and wellbeing. The purpose of these research questions was to determine the specific aspects of their pursuers' safety and wellbeing that helpers attend to, if any, and how those aspects relate to perceptions of helpers' effectiveness and success.

Research Question 3 sought to identify the aspects of their pursuers' wellbeing

and safety that helpers attended to while helping their pursuers overcome obstacles separating them from their goals. The details for each aspect will be offered in turn.

Most helpers in this study (Table 5.31) reported attending to at least one aspect of their pursuers' wellbeing (*n* = 384, 96%). Helpers described attending to seven main features of their pursuers' wellbeing (Table 5.32): happiness (*n* = 16, 4%), comfort (*n* = 44, 11%), physical (*n* = 51, 12.75%), academic (*n* = 191, 47.75%), mental/emotional (*n* = 32, 8%), superordinate group (*n* = 13, 3.25%), employment/financial (*n* = 35, 8.75%), and comfort (*n* = 4, 1%). A further fourteen helpers (3.5%) reported attending to a combination of academic, mental/emotional, physical, and happiness aspects of their pursuers' wellbeing. Given the number of helpers operating in the academic domain, it is perhaps unsurprising that most helpers also reported attending to the academic aspect of their pursuers' wellbeing.

Table 5.31

Research Question 3: The Aspects of Pursuers' Wellbeing that Offensive and Defensive Helpers Reported Attending To

Aspect of Pursuers' Wellbeing Helpers Attended To	Type of Helper		Total
	Offensive *n* (Row%)	Defensive *n* (Row%)	
None	14 (87.5%)	2 (12.5%)	16
Happiness	38 (86.4%)	6 (13.6%)	44
Physical	43 (84.3%)	8 (15.7%)	51
Academic	185 (96.9%)	6 (3.1%)	191
Mental/Emotional	31 (96.6%)	1 (3.1%)	32
Superordinate Group	13 (100%)	0 (0%)	13
Employment/Financial	35 (100%)	0 (0%)	35
Comfort	3 (75%)	1 (25%)	4
Academic, Mental/Emotion	8 (100%)	0 (0%)	8
Academic, Physical	2 (100%)	0 (0%)	2
Happiness, Mental/Emotion	1 (50%)	1 (50%)	2
Happiness, Physical	1 (100%)	0 (0%)	1
Physical, Mental/Emotional	0	1 (100%)	1

χ^2 (12, N = 400) = 42.8, $p < .001$, Cramer's $V = .33$

An additional analysis showed that there was a difference between how frequently offensive and defensive helpers reported attending to the different aspects of their pursuers' wellbeing (χ^2(12, N = 400) = 42.8, p = .01, Cramer's V = .33; Table 5.32). Specifically, defensive helpers reported attending to the happiness and physical health aspects of their pursuers' wellbeing more frequently than would be expected by chance alone, whereas offensive helpers reported attending to the academic aspect of their pursuers'

wellbeing more frequently than would be expected by chance. Whereas most helpers in this study said they were attentive to pursuers' wellbeing, most helpers (n = 365, 91.25%) reported not orienting to their pursuers' safety. The thirty-five helpers in this study who described attending to three main aspects of their pursuers' safety primarily attended to concerns about specific and immediate threats to their pursuers' health (n = 27, 6.75%),. Helpers attending to aspects of their pursuers' safety did not report attending to multiple facets of their pursuers' safety. An additional analysis revealed that, as with helpers attending to features of their pursuers' wellbeing, there was a difference in how frequently offensive and defensive helpers reported attending to aspects of their pursuers' safety ($\chi^2(3, N = 400) = 19.4$, $p < .001$, Cramer's $V = .22$). Specifically, defensive helpers reported attending to aspects of their pursuers' health safety concerns more frequently than expected due to chance alone, and offensive helpers reported attending to their pursuers' health safety concerns less frequently than expected due to chance alone.

Table 5.32

Research Question 4: The Aspects of Pursuers' Safety that Offensive and Defensive Helpers Reported Attending To

Aspect of Pursuers' Safety Helpers Attended To	Type of Helper		Total
	Offensive *n* (Row%)	Defensive *n* (Row%)	
None	347 (95.1%)	18 (4.9%)	365
Security of Physical Structure	2 (100%)	0 (0%)	2
Bodily Security Against a Threat	5 (83.3%)	1 (16.7%	6
Health Concerns	20 (74.1%)	7 (25.9%)	27

χ^2 (3, N = 400) = 19.4, $p < .001$, Cramer's $V = .22$

Research Question 4 sought to learn what relationship, if any, existed among the aspects of their pursuers' wellbeing and safety helpers attended to and the extent to which helpers believed they effectively and successfully helped their pursuers overcome obstacles separating them from their goals. There was only one statistically significant correlation among the twelve possible correlations: There was a weak negative relationship between the safety aspects pursuers reported attending to and their perceptions of their effectiveness ($r(400) = -.10$, $p = .04$). Thus, it appears that there is little relationship between the aspects of their pursuers' safety and wellbeing that helpers attend to and helpers' perceptions of their own effectiveness and success.

Discussion

The major purpose of this study was to learn whether the social catalysts operated in domains other than courtship and, if so, how. To do so, this initial investigation of

helpers collected open- and closed-ended data to test hypotheses and answer research questions about the following constructs: helpers' motivations, substitutability, effect on pursuers' resources, personality traits and their pursuers' goals and obstacles. The results of this investigation clearly support the contention that social catalysts operate in many domains other than courtship. This section will expand on that point by discussing themes that cut across the hypotheses and research questions, and then by discussing each set of results in turn. Aside from establishing the now-obvious point that many social contexts make room for helpers, we will explore how domains cross-cut the other issues this dissertation has been examining.

Helpers Operate in Many Social Domains

A line of analysis necessitating this study (see Chapter 2, and Chapter 4's Discussion) offered a critical examination of social domains such as politics, medicine, and criticism to propose that social catalysts occur in social domains other than the courtship domain with which they are typically associated. Through their free responses to non-leading prompts, more than 95% of participants in this study spontaneously reported helping pursuers in twelve domains besides courtship. In fact, respondents said they operated in eight domains more frequently than the courtship domain, which suggests that, for this sample, courtship is not the circumstance in which they most frequently recalled helping others overcome the obstacles separating them from their goals. Naturally, the sample's life experiences probably influenced the domains reported. Because most of these participants were undergraduates, it is perhaps unsurprising that nearly half of them reported helping in a domain, academics, that reflected how they and their network spend

a major portion of their time. Still, nearly half reported operating in other contexts. Further studies of social catalysts should strive to diversify their samples to obtain a fuller sampling of social domains and a clearer picture of how helpers operate in them. This might be done by selecting a demographic group (e.g., retirees) and finding out where they help, or by choosing a context (e.g., working with underprivileged children) and learning who helps. The various measures and issues raised in this study will be valuable in either case.

In addition to operating in many contexts other than courtship, the helpers in this study demonstrated that they operated differently depending on the domains. For example, helpers in the emotional/mental health domain and the social/relational domains perceived their pursuers' obstacles as being much larger than obstacles in other domains, whereas helpers for athletic objectives perceived their pursuers' obstacles as being smaller than obstacles in other domains. Helpers' motivations also differed by domain. Helpers in the service, creative and travel domains reported the highest levels of personal motivation, whereas those serving social/relational, and romantic, and emotional/mental health pursuits reported the lowest levels of personal motivations. Domestic aides reported the highest levels of acting from dyadic motivations, whereas helpers in the romantic, athletic, and technological domains reported the lowest levels of acting from dyadic motivations. Helpers in the emotional/mental health and social/relational domains reported acting from the greatest amounts of communal motivations, whereas helpers in the service and travel domains reported the lowest levels of communal motivation. Helpers in the technological domain self-reported the most perceptions that they showed their pursuers

how to make better use of their resources, whereas helpers in the travel and domestic domains reported the least. Finally, helpers in the creative, emotional/mental health, and physical health domains reported the strongest beliefs that they showed their pursuers a new path around the obstacles that separated them from their goals, whereas helpers in the service and travel domains reported the weakest beliefs that they showed their pursuers a new path around those obstacles.

Taken together with the other ways in which helpers in different domains did not display differences (e.g., perceptions of success, effectiveness, substitutability, and general importance of their pursuers' goals), these findings suggest two patterns. First, social domains affect why helpers agree to assist their pursuers and how large helpers perceive obstacles to be, two factors that may be mutually reinforcing. Consider the emotional/mental health and social/relational domains. The helpers in this study rated the obstacles in those two domains as the largest. They also rated their communal motivations as strongest for those domains and their personal motivations as lowest for those domains. Helpers in the emotional/mental health and social/relational domains seemed to be motivated by concerns for their pursuers' safety and wellbeing *because* they perceived how large the obstacles facing their pursuers are. Relatedly, helpers may perceive how large their pursuers' obstacle is and essentially donate their assistance — that is, act without expectation of repayment because the obstacle is so large that they do not believe that their pursuer can repay the favor. Either way, there appears to be an emerging relationship among the domains in which helpers operate, their perceptions of the obstacle's size, and how those two things affect their motivations for assisting pursuers. Therefore, features

of the domains that influence helpers' perceptions of obstacle size should be investigated, catalogued, and used to enrich knowledge of social catalysts.

Second, these findings suggest that social domains may provide a useful organization within which we might be able to collect many of the phenomena observed here. In this study, indicators of helpers' motivations, resource provision, and importance of their pursuers' safety and wellbeing goals emerged from coding participants' free responses. The connecting theme here is helpers being inclined to expend effort showing pursuers how to reorganize their resources in order to overcome the obstacle separating them from their goals. For example, consider the creative and travel domains. These data showed that helpers in both the travel and creative domains were not particularly concerned about their pursuers' safety or wellbeing, and helpers in both domains helped their pursuers because they thought they would benefit from doing so. The one dimension that distinguishes these two domains is a dimension that captures the extent to which helpers show pursuers how to reorganize and make better use of existing resources. Helpers in the creative domain reported high levels of showing pursuers how to reorganize and make better use of existing resources, whereas helpers in the travel domain largely did not. Thus we see one pattern emerge that may be useful in distinguishing social domains. As stated above, this argument for the utility of dimensions to distinguish social domains was based on qualitative data and small sample size, not on a reasonably powered factor analysis. So, future studies of whether and how social domains may be profitably characterized using dimensions important to social catalysts should follow well established quantitative procedures for identifying what dimensions, if any exist. Future studies should also sam-

ple widely to account for people's apparent tendency to report about social domains that are important to them and/or that they can easily access.

Similarities and Differences Between Offensive and Defensive Helpers

The offensive and defensive helpers in this study, who were identified by coding their free responses, showed similarities and differences, both expected and unexpected. Three such differences will be discussed in this section.

First and perhaps most important is that there was no statistically significant difference between offensive and defensive helpers on any personality traits. Offensive and defensive helpers reported indistinguishable amounts of self-esteem, need to belong, strength of helping attitudes, extraversion, openness, conscientiousness, agreeableness, neuroticism, and empathy. Taken together, this indicates that pursuers did not select the helpers in this study because these helpers had more or less of some personality trait that might lead to more success for pursuers. Additionally, when considering that both offensive and defensive helpers reported believing that few other people had the skills they used to help their pursuers, a further implication is that pursuers strategically selected the helpers in this study for instrumental reasons — because these helpers had a specific set of desirable skills pursuers thought would increase their chances of success — and not for a particular temperament. Future studies should continue to probe the similarities and differences of skills and personality traits, if any, between offensive and defensive helpers.

A second important point about comparisons between offensive and defensive helpers concerns effectiveness. Offensive and defensive helpers reported similar strengths of belief about the extent to which they eliminated or decreased their pursuers' obstacles,

showed their pursuers a new path around an obstacle, and increased their pursuers' obstacles. Despite reporting similar behaviors, offensive helpers reported stronger beliefs than did defensive helpers that they were effective and that their pursuers were successful. This difference in outcome despite a similarity in method may be attributable to the relatively small number of defensive helpers in this study. Perhaps with an improved sampling of defensive helpers, this difference would disappear. However, this difference in outcome may also be attributable to a difference in how framing goal-relevant behavior influences perceptions of success. There are more ways to avoid a goal than there are to attain one. Therefore, it may be the case that defensive helpers' judgments of their effectiveness and success may reflect their greater uncertainty that the strategy they selected from among the many other strategies available to them improved their pursuers' chances of avoiding an undesirable outcome. Defensive helpers' judgments may also reflect another kind of uncertainty unique to outcome avoidance. Typically, when one moves toward a desired outcome, achieving the goal occurs, and so the episode transitions from a current, active episode to a past one. However, when one moves away from an undesired outcome, one does not have the luxury of finality that those who move toward desirable outcomes have, because the best one can say when moving away from an undesirable outcome is that that outcome has been avoided *for now*. The threat may recur in the future and necessitate future evasive action. So, defensive helpers' judgments about their effectiveness and success might just have more inherent uncertainty to them.

Third, as theorized, the defensive helpers in this study reported that the importance of their pursuers' safety and wellbeing goals was stronger for them than was the

importance of those goals for offensive helpers. This result appeared in spite of the finding that offensive and defensive helpers reported similar amounts of communal motivation, a motivation that speaks to prioritizing pursuers' comfort, wellbeing, and safety. Together, these findings suggest that although both offensive and defensive helpers act to promote pursuers' comfort, wellbeing, and safety, it is defensive helpers who are more attuned to how important their assistance is for their pursuers' safety and wellbeing.

Just as in Chapter 2, offensive and defensive assistance was systematically different, across many interactive contexts. Temperament did not distinguish people who selected these two social roles, but once engaged, they had different views about their effectiveness and operated from different motivations.

Sex Differences

The first study of helpers reported in an earlier chapter of this paper found some sex differences in how helpers operated in the courtship domain. Because the investigation reported in this chapter sought to find evidence of whether and how helpers operate in other domains, it was worthwhile to determine whether the sex differences noted in the first study appear in other domains. That does not appear to be the case. Specifically, no sex differences were observed for the type of helper participants reported acting as, nor for the domain in which participants reported helping. These finding indicate that the more general phenomenon does not appear to be sexed in the way that it is in the courtship domain. The romantic contexts examined in Chapter 2 seem, in retrospect, to be unusually gender-centered and that may have been the source of some of the sex differences observed there. It might be interesting to examine some other sex-relevant situa-

tions (e.g., counseling a friend with either breast or prostate cancer) to see whether sex differences reappear.

However, there were three related constructs on which sex differences were observed. Female participants reported placing greater importance in how important their pursuers' goals were, how much dyadic motivation they reported, and how much communal motivation they reported. It is possible that this pattern of sex differences is another example of women's tend-and-befriend response to stress (Taylor, Klein, Lewis, Gruenewald, Gurung, & Updegraff, 2000; Taylor & Master, 2010). Specifically, women evince a tendency to nurture, protect, and care for those they are close to during times of stress. Because people find the experience of wanting but failing to achieve a goal stressful (e.g., Lewin, 1952), it is not unreasonable to suspect that the female helpers in this study responded to their pursuers' stress by acting from and for relational motivations more than male helpers and by perceiving pursuers' goals as being more important than the male helpers in this study. Future research should explicitly measure and analyze these constructs to illuminate this hypothesis, and try to separate sex-typed activity from domain-typical involvement.

Helpers' Effectiveness

Three hypotheses about helpers' effectiveness were supported. Helpers believed they were effective and are important to their pursuers' success. If this is intersubjectively true, it offers an explanation of why so many social circumstances make a place for catalysts. It is important to note that this study does not have data from pursuers about whether they found their helpers to be effective and important to their successful goal

pursuit. This pattern of results from the helpers' perspective is also important because it suggests that helpers' beliefs about their own effectiveness may circulate within this culture as a narrative supporting the utility of helpers regardless of whether pursuers agree about their utility. Circulating beliefs about helpers' effectiveness and success can increase the perception that they are useful even though people may have had direct personal experience to the contrary (Corazzini, Pavesi, Petrovich, Stanca, 2012), thus encouraging people to seek out helpers if they cannot overcome an obstacle to a goal on their own. Future studies should investigate pursuers' perspectives about of helpers' effectiveness and importance to overcoming an obstacle that separates them from their goals. It might be interesting to collect and study circumstances when people resent help, such as unwanted advice, unwelcome surprise parties, or back-channel arrangements that backfire. These might offer contrast cases that could clarify the appropriateness of helping.

Effects of Helpers on Pursuers' Resources

Three hypotheses about the effects helpers have on their pursuers' resources received mixed support. As predicted, helpers' perceptions that they increased pursuers' resources and showed pursuers how to reorganize and make better use of their resources were associated with more positive perceptions of their own effectiveness and, in the case of increasing pursuers' resources, was also associated with greater estimated pursuer success.

But, oddly, helpers' beliefs that they diversified their pursuers' resources showed the opposite pattern. As these beliefs increased, helpers' perceptions of their effectiveness

and success decreased. Perhaps helpers thought that diversifying their pursuers' resources imposed additional burdens their pursuers did not have before the "assistance." Examining participants' free responses, however, showed that diversifying their pursuers' resources was a popular strategy for the helpers. More than 80% of the helpers reported using one of twenty strategies to help their pursuers overcome obstacles to achieving their goals. Thus, there seems to be inconsistency between what the helpers in this study reported doing to help their pursuers and helpers' beliefs that those actions yielded success. One reason for this discrepancy might be methodological. Specifically, helpers' resource-provision strategies were coded by the type of social support helpers believed the strategies conferred upon their pursuers. The social-support coding scheme used in this study (Goldsmith, 2004) identifies five social-support strategies, of which only two (tangible, network) allow for helpers to directly intervene and move their pursuers past an obstacle and closer to their goals. The other three strategies (esteem, emotion, and information) allow for more indirect support. So, because helpers are theorized to be more skilled than their pursuers in goal-relevant ways, this inconsistency might simply be the result of helpers' frustration at not being able to take direct action to ensure their pursuers' success. To test this idea, future research should measure whether there is a difference in skill between pairs of helpers and pursuers, whether pursuers perceive and are burdened by the increased cognitive complexity required of them when negotiating resource-provision strategies, and the degree to which pursuers' perceptions of success and their helpers' effectiveness is related to what resources, if any, their helpers provide.

Helpers' Substitutability

Earlier theorizing predicted that helpers' perceptions of their own substitutability would affect perceptions of their effectiveness and success. Two structural equation models, one unmediated and one mediated, were created to test these hypotheses. The hypotheses were not supported. One assumption underlying the arguments about helpers' substitutability was that helpers would have a fairly keen understanding of how their skills and willingness to help rated in comparison to others' skills and willingness to help because people tend to have fairly keen understandings of how they rank on particular dimensions in groups of people. However, a contextualizing force that affects helpers' understanding of how their skills and willingness to help compares to others' in their pursuers' social networks is knowledge of who is in their pursuers' networks. It is difficult to rate how one rates against unknown others. A better way to measure helpers' substitutability is to ask pursuers to rate that quality instead of helpers. So, future studies might benefit from investigating which helpers qualities pursuers and helpers are best able to evaluate.

Domains and Motivations

One clear finding that emerged from this study is that some domains appear to encourage pursuers to frame goal pursuit as only movement toward an attractive goal. This framing means defensive helpers do not appear to be needed in those domains. So, future researchers investigating helpers' motivations might bear in mind this finding and use the sampling methods described by King and Zeng (2001) to ensure an adequate number of defensive helpers for the analysis. However, the lack of enough defensive helpers to test this hypothesis raises a larger theoretical point: There may be domains in

which defensive helpers simply do not exist in large numbers. Because helpers are defined by the type of goal-relevant movement their pursuers want to undertake, the implication is that there are some domains in which defensive helpers may not exist because the only goal-relevant movement that people wish to undertake is offensive. "Defense" would seem to presuppose "danger," and perhaps there are undertakings that do not risk serious negative outcomes. The first study about helpers in the courtship domain clearly and robustly showed that some pursuers conceived of themselves as moving toward desirable goals and away from undesirable goals. In this study, offensive helpers far outnumbered defensive helpers in each of the domains, with the notable exception of the courtship domain, in which offensive and defensive helpers occurred nearly equally.

These results suggest that there exist many domains in which, as Lewin (1952) suggested, all goal-relevant movement is movement toward a goal, and that domains such as courtship, in which goal-relevant movement can be toward or away from a defined goal, are rarities. This implication raises another. Because goal-relevant movement is undertaken as a consequence of whether people define goals as desirable or undesirable, it may be the case that in many domains of social life people recognize only goals toward which they would like to move. If this is the case, then it is further support for the contention that helpers acting in the courtship domain are a special case of helpers acting in any social domain. This reminds us that social episodes are privately and social constructed in many respects, and perhaps only certain patterns of construction invite offensive or defensive or any helpers at all. This idea proposes further study of how people define goals and of how those definitions affect their plans and actions.

Effects of Helpers' Motivations

Hypothesis 11 proposed that wingpeople acting from personal motivations would be perceived as less effective and successful than wingpeople acting from dyadic or communal concerns. This hypothesis was supported because the only significant path from motivations to effectiveness and success was a positive path from strength of communal motivations through the mediating variable of the degree to which helpers showed pursuers a new path around their obstacles. So only communal motivations exerted a significant (and positive) effect on effectiveness and success. This finding suggests that acting from concerns about their pursuers' comfort, wellbeing, and welfare may confer on helpers increased energy (responsibility, duty, necessity) or, perhaps, additional psychic resources to undertake the more effortful approach of showing pursuers a new path around an obstacle. Furthermore, perhaps helping someone around an obstacle yields greater success than other tactics. It may also be the case that helpers believed they were more effective and successful because they expended more effort to helper their pursuers overcome an obstacle. In any event, it would be worthwhile for future studies to measure how much effort helpers believed each of the four mediating variables required of them and whether showing pursuers a new path around an obstacle was more successful because it is the superior strategy or because the effort involved led helpers to be predisposed to regarding it as a more successful strategy than perhaps it was. A cost-benefits approach might be natural here.

It should be noted that the findings of relationships among these constructs, as with findings of relationships among all the constructs reported in this study, may be in-

fluenced by the social domain in which data are collected. Nearly half of the participants in this study reported about a single social domain; data from different domains were collapsed together in these analyses. Therefore, it may be the case that investigating helpers in a single domain changes the complexion of the relationships among these constructs because the results are not muddied by data from other domains.

Improving Pursuers' Resources

This study also sought to learn how helpers affect their pursuers' resources. Most pursuers described taking action to affect their pursuers' resources; only 4 percent of the sample reported not using any of the three means of affecting their pursuers' resources. The most frequently used resource-improvement strategy was diversifying pursuers' resources, and the least frequently used was helping pursuers make better use of existing resources. Diversifying pursuers' resources was also the resource-improvement strategy that showed the greatest diversity of strategies — twenty — that helpers described using to help their pursuers overcome an obstacle to their goal pursuit.

Results showed how important social-support strategies were for improving pursuers' resources, as attested by helpers. Specifically, helpers in this study described using the information support alone or in combination most frequently, followed by tangible support alone or in combination. As a result, helpers appeared to prefer using social supports that are most likely to have the largest effect on helping pursuers overcome obstacles to their goals. Emotional support is useful and needed, but may not be perceived by helpers as unsticking helpers as effectively as information and tangible supports, which more are likely to equip pursuers with resources they can use to unstick themselves. This

implies that the domains studied here were rather utilitarian, since obviously emotional support would be essential in an emotion-ridden circumstance. Perhaps a different study design would be needed to collect data on comforting wingpeople. Future studies should investigate whether patterns of helpers' social-support provision are similar across different social domains.

Pursuers' Wellbeing and Safety

Episodes in which someone seeks some goal can aim at positive outcomes (e.g., getting a promotion) and/or at negative possibilities that need to be avoided (e.g., humiliation). Concerns about well-being and safety seem oriented to the second, more pessimistic, anticipations. Helpers can aim toward one kind of outcome and away from the other. So it was natural to seek information about what aspects of their pursuers' wellbeing and safety helpers attended to, if any.

An earlier investigation of helpers in the courtship domain and reported in Chapter 2 found that those helpers were sensitive to their pursuers' wellbeing and safety concerns, so this investigation sought to formalize the issue and investigate it across domains. Nearly 96% of the helpers in this study described attending to their pursuers' wellbeing, whereas only 8.75% of the helpers in this study described attending to their pursuers' safety. The difference between the number of helpers concerned about their pursuers' wellbeing and safety is probably the result of the domains helpers described. Unlike wellbeing, which helpers in all domains described attending to, attending to pursuers' safety concerns was mainly limited to helpers in the physical health domain. So, it would seem that helpers' focus on pursuers' safety is domain-specific, unlike wellbeing,

which appears to be a concern that helpers in many domains have.

General Remarks

The key possibility investigated in this study was that courtship might be a boundary condition for wingmanning. That is, perhaps the phenomenon really only appears in bars and wedding receptions. The most general lesson of this second investigation is that the phenomena are recognizable and common in many social contexts. Domains do make some difference, but the most common motivations, actions, understandings, and outcomes of taking on the roles of guide and protector are comparable in many social involvements.

Chapter 6: Conclusion: A Case for Social Goal Pursuit and Social Catalysts

This dissertation has made the case for a new model of goal pursuit — a model of social goal pursuit. It has done so by focusing on the people in the social world who don the helper role and aid others in overcoming obstacles blocking their goals that, crucially, they were unable to overcome by themselves. Prior chapters unified three models of goal pursuit, explained the helping role and the unique benefits such a perspective provides, and reported the results of two initial, exploratory studies designed to test these ideas. The present chapter will discuss how the results of those two studies support aspects of the social model of goal pursuit and point toward a theory of social catalysts.

Model of Social Goal Pursuit

The social model of goal pursuit unifies three major theories of goal pursuit and improves upon them by shifting attention to the helping role, the role that is the engine of social goal pursuit. Each of the three models that the social model of goal pursuit unifies (field theory, goals-plans-actions model, and social support) are useful but incomplete conceptualizations of goal pursuit. To review: Field theory is useful because it frames goal pursuit as goal-relevant movement and specifies that failure occurs as the result of encountering insurmountable obstructions. However, field theory is incomplete because it fails to contemplate that goal-relevant movement occurs in a social domain, thus failing to anticipate that another social actor could help the pursuer overcome the obstruction and achieve success. The goals-plans-actions model is useful because it specifies the messages-influenced cognitive processes that create goal-relevant movement and offers a general discussion of how people might attempt to manage obstructions on their own.

However, the goals-plans-actions model is incomplete because although it implies that other people can, through messages, influence the GPA goal-pursuit process, it does not specify that or how other people might do so. Finally, social support, a model of interpersonal communication, is useful because it specifies the categories of messages people in a helper role create to assist others in overcoming obstructions and it investigates a narrow band of emotional and relational outcomes. However, because social support is not widely considered to be a model of goal pursuit, few researchers have treated seriously and theorized about what lead them to receive social support, how those messages affect their ability to overcome obstacles, and how their instrumental objectives are achieved after reaching it.

While each of these approaches has been successful in its chosen domains, for the purposes of this study, the individual shortcomings of each theory of goal pursuit are serious. Together, those limits point to a larger problem. Because goal-pursuit theorists have often failed to regard it as a *social* endeavor (rather than an individual one) and because social-support theorists failed to be curious enough about what *necessitated* social support (and perhaps helper recruitment), theorists have failed to see and regard as theoretically and instrumentally interesting those people in the social world who don the helping role and assist others in overcoming obstacles and achieving their goals. As this study's arguments and evidence demonstrate, these helpers are ubiquitous in our social world. Indeed, more than half the participants in the second study's sample reported having taken on the helper role in the three months prior to their participation, and a further third of the sample reported seeking out a helper to help them overcome an obstacle that kept

them from their goals in that period.

The benefits of a model of social goal pursuit that centers helpers, the people who make resuming goal pursuit possible, are numerous. Just four will be discussed in this section.

First, focusing on helpers allows explicit theory about their role in others' goal-pursuit process. For decades, researchers who studied goal pursuit and social support were interested in helpers to the degree that helpers responded with supportive messages to a person in distress. Instead of being secondary to pursuers, helpers can now be properly regarded as equally agentic as pursuers, thus allowing researchers to investigate how helpers influence pursuers' goal attainment. For example, the first study reported in this manuscript found that there were times when pursuers and helpers worked together to shape the specifics of pursuers' goals, and other times when helpers reported that they solely shaped the specifics of pursuers' goals. This initial evidence that helpers can, in certain conditions, help shape their pursuers' goals means that traditional models of goal pursuit have also fallen short by assuming that helpers only support and do not shape their pursuers' goals. Further research into the conditions under which helpers shape pursuers' goals and the resulting interpersonal and goal-pursuit outcomes is necessary. This study, for example, has indicated that helpers had several distinct motives and reasons of their own for adopting some version of the pursuers' goals. Strict focus only on distressed pursuers artificially limits the number of helping episodes that were even recognized as such because non-distressed pursuers were largely not regarded as needing to receive social support and therefore were largely not studied.

A second benefit is that the model of social goal pursuit allows for a more accurate and fruitful investigation of how interpersonal relationships and partner's goal pursuit are mutually influencing. For example, a line of analysis in the first study about wingpeople, the term for helpers in the courtship context, noted that helpers in that domain acted at immediate and medium-term cost (e.g., time costs associated with attracting but not keeping a valuable mate, social costs incurred with keeping undesired suitors away from a friend). Some wingpeople balanced this cost immediately by only helping if they could directly benefit from doing so. Other wingpeople regarded helping as an investment in the relationship with the pursuer or in the pursuers themselves. One could imagine further investigations of what happens to an interpersonal relationship if one partner declines to don the helper role to benefit the other (is this betrayal? avoidance of duty?), or what happens in a network of interpersonal relationships if a pursuer seeks out one partner for a helping role that another partner believes he or she is qualified for (is this another type of betrayal? a humiliation?). One could also imagine longitudinal studies investigating whether and how relational partners' decisions to act as helpers and their facility in doing so affects the quality of their relationship over time. Thus we see this model of social goal pursuit allows researchers to see and investigate how interpersonal relationships and goal pursuit affect one another.

A third benefit is that new constructs about the interpersonal relationship between helpers and pursuers and pursuers' goal pursuit can be conceptualized and investigated. Two such ideas were investigated in this manuscript: (a) how helpers affect pursuers' resources and (b) helpers' substitutability.

How helpers affect pursuers' resources is an important construct because it specifies how supportive messages yield interpersonal capabilities and goal-pursuit outcomes. Three ways that helpers could affect pursuers' resources were conceptualized and tested in the second study: increasing the number of resources pursuers could access and bring to bear on their goal pursuit, diversifying the resources pursuers could use, and showing pursuers how to make better use of resources they already had access to. The results of the second study demonstrated the robustness of this three-part framework of how helpers' supportive message affect pursuers' goal-relevant movement. Helpers in the study typically described using a multi-message approach to affect pursuers' resources in more than one way. The construct describing how helpers affect pursuers' resources allows us to see and appreciate the complexity and communicative effort associated with the helper role, the types of message helpers use to influence their pursuers' resources, and what patterns of supportive messages emerge across social domains. Although many helpers reported believing they were effective and successful, we do not know whether their pursuers share that belief or what the effects were on the helper-pursuer relationship. Future investigations would do well, then, to investigate matched pairs of helpers and pursuers and extend their focus to the interpersonal as well as the instrumental outcomes of how helpers affect pursuers' resources.

A second construct theorized to affect the interpersonal relationship between helpers and pursuers and pursuers' goal pursuit was helpers' substitutability. Different social domains are thought to require different evidentiary, persuasive, and instrumental standards to remove obstacles to pursuers' goal pursuit. For example, a best friend can

help with one task, but a lawyer might be needed for another. As a result, social domains are thought to differ by how easy it would for frustrated pursuers to find someone to don the helping role and help them remove their obstacles. Those domains in which pursuers would have an easier time finding assistance are high substitutability domains because helpers for those circumstances can be readily interchanged for other people without risk to goal pursuit. Domains in which pursuers would have a more difficult time interchanging people in the helping role are low in ubstitutability. In the second study, substitutability was measured as having three dimensions: how easy it would be to find someone to put in the helper role, how substitutable the skill set necessary for successful goal pursuit was, and how substitutable the willingness and motivation necessary for successful goal pursuit was. The results showed that the three substitutability variables did not demonstrate a pattern of significant relationships with other key constructs. This lack of relationships might be because substitutability is conceptually and empirically unimportant. But it may also be because helpers are not able to accurately assess how substitutable they are or might be with others in their pursuers' networks. Because this is an initial investigation, we are unable to compare this one pattern with others. So, additional investigations should endeavor to settle this question. It might be interesting to get estimates of substitutability from uninvolved people, instead of simply asking the helpers.

One of the benefits of these two new constructs (resource management and substitutability) was their heuristic value. They generate new thoughts and perspectives on what is going on in a helping relationship.

The fourth main benefit of this model of social goal pursuit is its insistence that

social domains be treated as variables of interest instead of merely as context on which the interesting things occur. In much the same way that theories of self, group, conflict, and communication benefitted from treating culture as a variable instead of as a context, theories of interpersonal communication and goal pursuit may well profit from treating social domains as a variable, too. As discussed above, social domains are important because they, like culture, affect, among other things, what goals are pursuable; what kind of goal-relevant movement is possible and appropriate; the size, number, kind, and duration of obstacles, and what actions are possible to surmount, sidestep, or demolish them; the number of people who are available, skilled, and sufficiently motivated to don the helper role. With sufficient theorizing and empirical investigation, theories of social domains might one day be as robust and useful as theories of culture. Just as a theory of Malaysia seems more limited than a theory of culture, we might eventually see that a theory of courtship is more limited than a theory of social interaction. This model of social goal pursuit encourages such investigation because, in its view, social domains are integral to explaining parts of goals, obstacles, movement, helpers, and pursuers.

This discussion of the approach's benefits provides context for the next section, a specific discussion of helpers.

The Helping Role

An earlier chapter of this dissertation defined and described the helping role at length, so only a brief summary is needed here. Helpers are people who take on the helping role to assist others in overcoming obstacles to their goal pursuit that they were unable to overcome on their own. Helpers exist in a triadic relationship with pursuers and

the pursuers' goal. People are typically invited to take on the helping role, although they may sometimes spontaneously adopt and perform the role. These invitations come when the pursuer's goal pursuit is frustrated or when the pursuer anticipates frustration. So far, helpers have been found for each social domain people pursue goals in and experience obstacles to that goal pursuit. Helpers can be roughly distinguished by the type of movement necessitated by their pursuers' goals: Offensive helpers assist pursuers to move toward attractive goals and defensive helpers move pursuers away from unattractive experiences. (The studies reported in this paper offer mixed support for this distinction and this will be further discussed below.) Finally, helpers use supportive messages to affect the resources pursuers are able to access as they attempt to overcome obstacles.

The two studies reported in this project offer initial evidence about the helper role, thus permitting some first tentative conclusions that reflect back upon several features of our conceptualization of helpers. The first point is that the helping role is ubiquitous. Most people in both studies reported being able to recall being a helper or seeking out a helper. In addition to the seven social domains scrutinized for insight into the helper behavior that were presented in the first chapter, participants spontaneously reported a further dozen social domains in which they adopted and performed the helper role. That nearly a thousand people in two U.S. states recalled being or needing a helper in one of twenty social domains in the three months prior to their participation supports the contention that helpers are a common and widespread feature of our social world.

The second of these conclusions concerns helpers' effectiveness. The two studies reported here offer initial evidence that helpers believe they effectively help pursuers

overcome obstacles blocking their goal pursuit. Helpers' responses about their effectiveness in the courtship domain and their quantitative responses about their effectiveness in the second study's domains work together to show that the helpers in these studies believed they were effective, successful, and integral to their companions' success.

The methodological decision to use only helpers as informants in these two studies is pertinent to this evidence, because it resulted in collecting data from only half of a two-role dyad. There are several novel concepts and constructs in this model of social goal pursuit, and data collection had to begin somewhere. A benefit of starting this data collection by using helpers as informants is that the people who performed the role can offer special insight into how their own cognitions, emotions, and behavioral intentions shaped their role performance that others cannot. This unique perspective permits access to key information that would otherwise be unavailable, such as information about their motivations, how they perceived their pursuers' obstacles, and how they believed they used messages to help their pursuers overcome their obstacles. As in the social-support literature, there is probably a difference between what people report doing as they performed the helping role and what pursuers report experiencing. Uninvolved outsiders might have other insights to offer.

All this should be investigated. A study design that privileges the perspectives of pursuers offers insight into: how, why, and when pursuers decided to recruit a helper; how many helpers they recruited; when and how pursuers believed they no longer needed a helper; whether pursuers could have or did eventually overcome their obstacles without pursuers; and what, from their perspective, the outcomes were for their goal pursuit and

their relationship with the helper. Both helpers' and pursuers' perspectives are necessary if we are to gather sufficient data to evaluate this model of social goal pursuit. Additionally, there is a chance that participants in this study reported only those episodes in which they succeeded in their helper role, perhaps because their successes were easier and sweeter to recall than their failures; the reverse is also possible. So, future investigations should ask participants to report all the times they acted as a helper in a given time period to offer a fuller understanding of how frequently people act as helpers. Diary studies might be feasible. Future work should also seek to understand how effective pursuers found their helpers to be and pursuers' perceptions of what helpers did to help them overcome the obstacles they identified. People who did not participate in these helping expeditions might offer general advice concerning helper substitutability, commonly available resources, the probability of successful goal pursuit, and other things that we now see could well be relevant to a fuller understanding of the helper-pursuer role alliances.

A third large conclusion we may draw is that a meaningful distinction between offensive and defensive helpers may be especially marked only in some social domains instead of being domain-general as Lewin theorized. The first study supports Lewin's contention that a clear contrast exists between attractive and repellant goals. Participants in the first study reported about performing their helping role in the courtship domain. Their responses indicated that their pursuers made it very clear what type of goal they wanted to pursue with respect to different suitors. Indeed, some wingpeople reported that their pursuers requested their help to simultaneously move toward an attractive potential romantic partner while moving away from an unattractive person. Other studies of

courtship support as common the distinction this study's participants made between attractive and repellant goals. So, in the courtship domain at least, pursuers believe there is a clear distinction between attractive and repellant goals, so helpers in that domain behave in accordance with that distinction. Participants in the second study did not make such a clear distinction between attractive and repellant goals. Indeed, only 6.5% of the 400-person sample reported helping pursuers move away from a repellant goal, and nearly half of the social domains had any defensive helpers at all. Moreover, the only domain in which the number of defensive helpers meaningfully approached the number of offensive helpers was courtship. Taken together, this evidence indicates that, as with many other aspects of goal pursuit, the social context in which pursuers seek their goals determines what goals are salient, frames how they perceive those goals (as attractive or repellant), and defines the kind of goal-relevant movement they and their helpers can undertake. This point also reinforces the importance of treating social domains as a variable: They are integral to the goal pursuit process and thus need minimally to be measured and controlled for.

The foregoing discussion of helpers as critical and perhaps even transformational to pursuers' goal pursuit suggests a metaphor for the helping role in social goal pursuit. That metaphor and its implications will be discussed next.

Helpers Are Social Catalysts

Metaphors, described by Aristotle as "giving the thing a name that belongs to something else" (trans. Bywater, 2017, Chp. 21, 1457b1-30), have long been used in science to clarify and stimulate new thought about constructs, functions, and processes.

Metaphors used to name major developments in the recent history of biology and ecology include genetic *blueprints*, food *chains*, and ecological *footprints* (Taylor & Dewsbury, 2018). In communication, we have inoculation, support, social penetration, relational turbulence, and many more. The benefits of using metaphor to explain scientific concepts includes bringing about learning. Sheehan (1999, p. 62) explained how this learning comes about: "New metaphors might offer the semblance of 'new truths' or 'new perspectives' but it is narrative invented through these metaphors that fills them out and situates them into our beliefs" because metaphors permit us to discourse differently about their subjects. Those who seek to use metaphor to stimulate new perspectives about a subject would do well to be reminded of Lakoff and Johnson's (1980, p. 11) observation that metaphors "focus our attention on some aspects of a concept while concealing others." Taylor and Dewsbury (2018) sharpened this observation about negative outcomes of poorly constructed metaphors to science. First, substandard metaphors can oversimplify into inaccuracy scientific findings, as with the case of genetic *blueprints* that analogize out of existence important findings about epigenetics and gene-environment interaction. Second, poorly constructed metaphors can reproduce hegemonic norms and values, as evidenced by slavery metaphors to describe some ant behavior. So, those who propose metaphors would do well to choose metaphors that are accurate, generative, do not unnecessarily oversimplify the major contours of the subject, and that do not reproduce harmful cultural values.

Because the benefits of using metaphors can accrue as long as their drawbacks are carefully mitigated, this paper will conclude by proposing a metaphor to clarify the helper

role, emphasize its importance to goal pursuit, and guide future thinking and research about the role. To do so, this dissertation will borrow from chemistry the concept of catalyst and apply it metaphorically to the helper role. Catalysts are substances that can increase the rate of a chemical reaction at a lower energetic cost and that are not themselves consumed by the reaction (Flowers, Theopold, Langley, & Robinson, 2019). Thus, we may understand chemical catalysts as substances that, when added to a process, bring about transformation without being changed themselves. We will now explore the utility of the catalyst metaphor when applied to the helper role.

The social catalyst metaphor is accurate for several reasons, some of which are discussed here. First, the social catalyst metaphor adequately captures the triadic relationship that helpers, pursuers, and pursuers' goals exist in, and specifies that helpers are *added to* another person's goal pursuit. Second, this metaphor captures how helpers *transform* their pursuers' previously insurmountable obstacles – in fact, their whole dynamic field of goals – and facilitate others' continuing goal-relevant movement. Third, the social catalyst metaphor invites investigation into the *processes* by which helpers transform their pursuers' obstacles, and emphasizes the importance of treating as a variable the social domain in which this process occurs. Fourth, the metaphor suggests that the *time* at which catalysts are introduced to a process is important — if they enter too early or too late in the process, they may not bring about the desired transformation.

The social catalyst metaphor also suggests several new, useful lines of inquiry into the helping role that may have been invisible before the metaphor's application. Two will be discussed here. A central idea of this metaphor is that catalysts are themselves un-

changed by the reaction they help to bring about. This idea deserves some attention because catalysts may either offer an environment that eases the transformation (heterogeneous catalysts) or they may directly and actively facilitate the transformation by combining with other chemicals present (homogeneous catalysts; Flowers et al. 2019). So, in the case of heterogenous catalysts, it is accurate to say they are unchanged by the transformation they help bring about. Unlike heterogeneous catalysts, homogenous catalysts are in fact changed by the transformation they help bring about because they combine with other chemicals present. However, in order to truly be catalysts, the rest of the transformation must allow for the homogeneous catalysts to fully reconstitute themselves. Thus it is not entirely accurate to say that homogeneous catalysts are unchanged by the transformation they help bring about. Rather, it is more accurate to say that homogeneous catalysts, through their active and direct participation in the process, are changed during the transformation they help bring about but that the process returns them to their pre-participation state. When applied to the helping role, the social catalyst metaphor offers two additional insights. First, we can distinguish between helpers who take a more passive, environment-altering approach and helpers who take a more direct and active approach designed to engage with the pursuers themselves and their goals. Second, we can explore the effects of facilitating goal-pursuit transformation on the people who take on the helping role. Because helpers are role occupants, we may further investigate whether and how the people who perform these roles are changed as a result of their performance and whether and how the role itself is changed as a result of being performed. This metaphor also offers new possibilities for investigating why some helpers in some situations fail to

assist in removing the obstacle that blocks their pursuers' goal pursuit. The social catalyst metaphor suggests that, for example, there may have been an insufficient amount of catalyst, a catalyst that was poorly matched to the desired reaction, or a catalyst that added additional steps to the chemical reaction for which an additional catalyst was needed but not available to be added.

Future research about the helping role and social goal pursuit would benefit from conceptualizing helpers as social catalysts.

Appendix

Study 1 Questionnaire

Instructions. Wingman is a term that comes from the military. It to a combat relationship between pilots such that the wingman flies on the lead pilot's wing and provides offensive support (e.g., adding additional firepower to increase the probability of success in during attacks) and defensive assistance (e.g., helping the lead pilot avoid enemies). The term has evolved to refer to males and females who help their friends achieve their romantic goals.

> **Offensive wingmen** are people who help their friends get the object of their romantic desire. **Defensive wingmen** help their friends someone they find undesirable.

The goal of this study is to understand how wingmen communicate.

I have been an **offensive wingman** (I have helped someone **obtain a desired other**): Yes No

> If yes, please respond to the following questions with as much detail as you are comfortable with. Please do not include any identifiable information. Use pseudonyms if you must.

How do you rate yourself as an offensive wingman?

Please describe your experiences being an offensive wingman. Please describe all relevant skills, characteristics, personality traits, and training.

How did you become an offensive wingman for the person you identified? Please include as many details as possible about how you became an offensive wingman including:

- How did you know this person wanted or needed your wingman abilities?
- If there was a conversation, who initiated it? What was the location of this conversation? Why?
- What did you talk about?
- If specific goals were discussed, what goals were identified? Who identified the goals?
- How much time passed between when you agreed to become an offensive wingman and when you performed your duties as an offensive wingman?
- Why do you think the person you identified wanted you to be an offensive wingman?
- Why did you agree to be a wingman?

What did you do as an offensive wingman? Please include as many details as possible about what you did as an offensive wingman, including:

- How did you know whom to approach on behalf of the person who wanted or needed your wingman abilities?
- Where was the setting for your offensive wingmanning?
- What did you say and do as an offensive wingman?
- What were your primary duties, goals, and obligations?
- How did the desired other(s) respond to you?
- How did you know when your wingman abilities were no longer required?
- What was the outcome of your wingmanning?

In general, what qualities and characteristics make someone a good offensive wingman?

In general, what qualities and characteristics make someone a bad offensive wingman?

In general, how do you know your offensive wingmanning has been successful?

In general, what are the rules offensive wingmen should following when talking to a desired other on behalf of the person who wanted or needed your wingman abilities?

In general, how do offensive wingmen benefit from wingmanning?

In general, how do the people who want or need a wingman's abilities benefit from the wingman's abilities?

How close you are to the person who wanted or needed your wingman abilities:
This is one of my closest relationships. SD 1 2 3 4 5 6 7 SA
I rarely interact with this person. SD 1 2 3 4 5 6 7 SA
I would say this person and I are tight-knit. SD 1 2 3 4 5 6 7 SA

Length of time you knew the other person before wingmanning for him/her (Please round to the nearest week):
_____ weeks
_____ months
_____ years

The sex of the person who wanted or needed your wingman abilities: Male Female

The sex of the desired other(s): Male Female

I have been a **defensive wingman** (I have helped someone a**void an undesirable other's romantic advances**): Yes No

If yes, please respond to the following questions with as much detail as you are comfortable with. Please do not include any identifiable information. Use pseudonyms if you must.

How do you rate yourself as a defensive wingman?

Please describe your experiences being a defensive wingman. Please describe all relevant skills, characteristics, personality traits, and training.

How did you become a defensive wingman for the person you identified? Please include as many details as possible about how you became a defensive wingman, including:

- How did you know this person wanted or needed your wingman abilities?
- If there was a conversation, who initiated it? What was the location of this conversation? Why?
- What did you talk about?
- If specific goals were discussed, what goals were identified? Who identified the goals?
- How much time passed between when you agreed to become a defensive wingman and when you performed your duties as a defensive wingman?
- Why do you think the person you identified wanted you to be a defensive wingman?
- Why did you agree to be a wingman?

What did you do as a defensive wingman? Please include as many details as possible about what you did as a defensive wingman, including:

- How did you know whom to approach on behalf of the person who wanted or needed your wingman abilities?
- Where was the setting for your defensive wingmanning?
- What did you say and do as a defensive wingman?
- What were your primary duties, goals, and obligations?
- How did the undesirable other(s) respond to you?
- How did you know when your wingman abilities were no longer required?
- What was the outcome of your wingmanning?

In general, what qualities and characteristics make someone a good defensive wingman?

In general, what qualities and characteristics make someone a bad defensive wingman?

In general, how do you know your defensive wingmanning has been successful?

In general, what are the rules defensive wingmen should following when talking to an undesirable other on behalf of the person who wanted or needed your wingman abilities?

In general, how do defensive wingmen benefit from wingmanning?

In general, how do the people who want or need a wingman's abilities benefit from the wingman's abilities?

How close you are to the person who wanted or needed your wingman abilities:
This is one of my closest relationships. SD 1 2 3 4 5 6 7 SA
I rarely interact with this person. SD 1 2 3 4 5 6 7 SA
I would say this person and I are tight-knit. SD 1 2 3 4 5 6 7 SA

Length of time you knew the other person before wingmanning for him/her (Please round to the nearest week):
_____ weeks
_____ months
_____ years

The sex of the person who wanted or needed your wingman abilities: Male Female

The sex of the undesirable other: Male Female

Demographics.
Your age (in years): _____

Your ethnicity: _____

Your year in school:
0: First year in bachelor's degree program
1: Second year in bachelor's degree program
2: Third year in bachelor's degree program
3: Fourth year in bachelor's degree program
4: Fifth year in bachelor's degree program
5: Sixth-plus year in bachelor's degree program
6: Pursuing master's degree
7: Pursuing doctorate
8: Not in school

I prefer my romantic partners to be:
0: Males

1: Females
2: Males and females
3: Neither

Relationship status:

0: Single – not dating anyone
1: Dating one person
2: Dating multiple people
3: Engaged
4: Married
5: Divorced
6: Widowed

Length of relationship in years _____ and months _____. (If not in relationship, please write "NOT IN RELATIONSHIP")

Study 1 Codebook

A. Motivations for wingmanning. Wingmen's motivations are the reasons they wingman for their pilots.

1. **Personal**. Responses from wingmen acting from speaking to personal motivations will indicate that only the wingman him- or herself gets something out of the act of wingmanning. Any help pilots receive is incidental to the wingman satisfying his or her needs or desires. Examples include, but are not limited to: "I like picking up girls," "I enjoy the thrill of the hunt," and "I always seek out opportunities to improve my social skills." Also, altruism. No mention is made of how the lead pilot, their relationship, or others benefit.

2. **Dyadic**. Responses from wingmen acting from dyadic motivations will contain evidence of reciprocity, that is, there is evidence of the wingman doing something to pay back a debt s/he incurred to the pilot or to create a future obligation the lead pilot must later pay back. The reciprocation may be in the same form (e.g., "Because he wingmanned for me last week" or "Because I know she'll have my back in the future") or may be in different forms (e.g., "I owed her one," "He helped me study for this killer midterm," or "I agreed because he said he'd buy my drinks all night"). The period in which reciprocation occurs may be immediate, after a while, or in an unspecified future.

3. **Communal**. Responses from wingman acting from a communal motivation act primarily out of concern for their pilot's welfare, wellbeing, safety, happiness, etc., and without regard for whether the pilot will reciprocate the favor. Communal wingmen are much more concerned about their pilot's wellbeing and comfort than they are about paying back debts or creating future obligations and may find reciprocity insulting, demeaning, or otherwise damaging to them and/or the relationship. Note that although there may be elements of reciprocity in communal motivations, communal wingmen's primary reason for action is concern for their friend's wellbeing, welfare, and/or happiness. Examples include, but are not limited to: "He was still not over his ex girlfriend who he dated in high school, and he was being shy, but i could tell by the way he looked at her that he liked her, and she was rather attractive . . . I genuinely wanted to help my friend put himself out there. We are good friends" and "The person who identified me wanted me to be a defensive wingman because they felt uncomfortable i agreed to be a defensive wingman because i . . . don't want harm or unpleasant situations to come to them."

4. **Other**. Responses that do not contain sufficient information to clearly and decisively sort them into one of the previous three categories go in this category. For example, "I want to" could indicate a personal motive if one assumes the wingman placed his/her needs above the pilot's, a dyadic motive if one assumes the wingman the wingman wants to repay a debt or create a future obligation, or a

communal motive if one assumes the wingman wants to look out for the pilot's welfare. In short, do not assume a wingman's motivations. If the motivations are not clear, put the response in this category.

B. Wingmen's goals. Wingmen's goals are the outcomes the wingmen hope to achieve for the pilot. Wingmen may report multiple goals.

1. **Attract a target.** Responses indicate a desired outcome of drawing a target nearer (physically, emotionally, relationally, etc.) to the pilot.

2. **Repel a target.** Responses indicate a desired outcome of putting distance (physically, emotionally, relationally, etc.) between the pilot and a target.

3. **Engage and/or neutralize a target's wingman.** Responses indicate a desired outcome of engaging with a target's wingman in order to free up the target to interact with the pilot.

4. **Isolate a target.** Responses indicate a desired outcome of keeping others away (physically, emotionally, relationally, etc.) from a target.

5. **Leave no pilot behind.** Responses indicate a desired outcome of staying near a pilot (physically, emotionally, relationally, etc.).

6. **Other.** Responses that do not fit any of the above goals and/or do not contain sufficient information to categorize should be categorized here.

C. Wingmanning tactics. Wingmen's tactics are the methods wingmen use to achieve goals. Wingmen may report multiple tactics.

1. **Willing subordination.** One way for wingmen to accomplish their goals is to lower their own attractiveness and/or goals absolutely and/or relative to a pilot, and/or by improving the pilot's attractiveness relative to the wingman.

    a. **Increases pilot's attractiveness to a target.** Compliments the pilot to a target; mentions nothing about him- or herself.

    b. **Decreases own attractiveness below pilot's attractiveness. W**ingmen's responses indicate an effort to lower their own attractiveness relative to the pilot, but none of the actions taken would render the wingman unattractive, nor do their actions improve the pilot's attractiveness.

    c. **Actively makes self unattractive.** Wingmen's responses indicate an effort to make themselves unattractive – that is, responses indicate a willingness to fall on one's sword by making oneself unattractive. No mention is made of effort to make the pilot more or less attractive.

    d. **Actively makes the pilot unattractive.** Wingmen's responses indicate an effort to make the pilot appear unattractive to a target (e.g., by suggesting

the pilot already has a romantic attachment). No mention is made of effort to make themselves more or less attractive.

e. **Does not romantically pursue the target.** Responses indicate the wingman agreed to subordinate his or her own romantic/courtship goals to the pilot's by not pursuing the target.

f. **Other.** Responses that do not fit any of the above willing subordination tactics and/or do not contain sufficient information to categorize should be categorized here.

2. **Relationship management**

   a. **Initiating the relationship**

      i. **Physically.** The wingman physically brings the pilot and target near one another but does not initiate conversation on behalf of either.

      ii. **Conversationally.** The wingman brings the lead and target together in conversation by, for example, initiating conversation.

      iii. **Networks**. The wingman knows someone the pilot wants to know, so the wingman provides the connecting information but leaves the pilot and target to initiate a conversation themselves.

   b. **Maintaining the relationship**

      i. **Physically.** The wingman helps the pilot and target maintain physical proximity.

      ii. **Conversationally.** The wingman helps the pilot and target maintain conversation.

      iii. **Networks.** The wingman helps the pilot and target maintain network connections (e.g., reactivating stagnant network ties, identifying someone the pilot and target know).

   c. **Terminating the relationship**

      1. **Physically.** The wingman helps separate the pilot and target in space.

      2. **Conversationally.** The wingman helps end conversation between the pilot and wingman.

      3. **Networks.** The wingman helps end network connections between the pilot and wingman.

d. **Teaching the pilot relationship-management skills.**

1. **Physically.** Responses indicate an explicit, concerted effort to improve the pilot's knowledge about how to use proxemics to initiate, maintain, and/or terminate relationships with targets.

2. **Conversationally.** Responses indicate an explicit, concerted effort to improve the pilot's knowledge about how to use conversation to initiate, maintain, and/or terminate relationships with targets.

3. **Networks.** Responses indicate an explicit, concerted effort to improve the pilots' knowledge about how to use networks to initiate, maintain, and/or terminate relationships with targets.

3. **Other.** Responses that do not fit into any of the above willing-subordination or relationship-management tactics and/or do not contain sufficient information to categorize should be categorized here.

D. When wingmen stop pursuing the objective.

1. **When the pilot's objective is achieved.** Responses contain evidence that wingmen let their pilots define whether an objective is successfully achieved (e.g., getting a phone number, hooking up, getting married, avoiding the target, punishing the target). Descriptions indicate that the pilot's goal was achieved. Because the pilot's goal was accomplished, the need for the wingmen to do anymore work toward the objective was obviated. Whatever the objective was, the wingmen stayed with the lead pilot until the pilot indicated that the objective was achieved.

2. **When the pilot is satisfied.** In these cases, wingmen indicate they left because their pilots seemed satisfied, happy, or otherwise pleased with the **wingman** and/or with the events the **wingman** helped bring about; there is no explicit mention of the status of the objective. Responses of this nature may include, "I don't know if my friend got the man she wanted, but I knew I was done because she looked happy."

3. **Before the objective is achieved, but with the sense that the pilot can pursue the objective without the wingmen.** In these case, wingmen indicate they left their pilots before the pilot's main objective was completed. However, wingmen leave with the knowledge that the lead pilot has set him- or herself up well to achieve the objective. Descriptions may indicate that wingmen either stayed interactionally involved until the lead pilot felt comfortable or that the wingman observed the interaction from a distance before departing. In any case, the wingman has a clear sense of the lead pilot's comfort or facility at continuing to achieve his/

her objective solo. Descriptions may indicate that the lead pilot learned a skill and is able to perform it without the wingman to the wingman's satisfaction.

4. **Before the objective is achieved, but with the sense that the pilot is happy.** In these cases, wingmen indicate they left their pilots before the pilot's main objective was completed. However, wingmen leave with the knowledge that their pilot is pleased, regardless of whether the main objective was accomplished, approaching accomplishment, or approaching disaster, and/or regardless of having information about the status of the objective.

5. **Before the objective is achieved, and without knowledge of the objective's status.** In these cases, wingmen discontinue helping the pilot and indicate that they either do not know or do not care to know the objective's status. In these cases, it is wingmen who decide when to stop pursuing the objective, not the pilot, and wingmen see their job as complete irrespective of whether their help is still needed.

6. **The objective is abandoned before completion.** In these cases, wingmen leave because they, their pilots, the targets, or the features of the situation have caused them to abort pursuit of the objective. Wingmen's responses indicate that they actively abandoned pursuing the goal (instead of, for example, passively neglecting to pursue the goal).

7. **Failure.** The wingman and/or pilot fail to achieve the objective.

8. **Other.** Responses that do not fit into any of the above categories about when wingmen (know to) stop wingmanning and/or do not contain sufficient information to categorize should be categorized here.

E. Targeting

1. **The pilot.** The pilot selects (perhaps including an evaluation process) the target with no input from the wingman.

2. **Wingman** The wingman selects (perhaps including an evaluation process) the target with no input from the pilot.

3. **Wingman and pilot.** The wingman and pilot jointly select (perhaps including an evaluation process) a target.

4. **The pilot is targeted.** The pilot is targeted by another non-wingman person.

5. **Other.** Responses that do not fit into any of the above categories about who controls targeting should be categorized here.

F. The type of support the wingman reports providing to or for the pilot.

1. **Informational**. Informational support occurs when one person provides another person knowledge, advice, and/or feedback about a topic.

2. **Emotional**. Emotional support occurs when one person provides another person with demonstrations of care, concern, empathy, and/or sympathy, allows the other person to vent negative emotions, and/or encourages the other person to share his or her feelings.

3. **Esteem**. Esteem support occurs when one person attempts to enhance another person's self-worth through, for example, expressing admiration or respect.

4. **Network**. Network support occurs when one person provides another person messages that reflect the person's belongingness in an ingroup/social network and/or by expanding his or her interpersonal networks. (CG: Takes a much more conservative view of networks: To sever a network, the parties must already be in a relationship of some sort; meeting at the location of wingmanning is not sufficient grounds for being in a network. Severing nascent networks is not considered a network support; must have interacted at least twice to be considered as sharing a network.)

5. **Tangible**. Tangible support occurs when one person provides another person necessary physical aid in the form of goods and services.

6. **Other**. Responses that do not fit into any of the above categories about who controls targeting should be categorized here.

Study 2 Questionnaires

Instructions. People pursue goals, but they aren't always successful. In the face of an initial setback, people can continue trying to reach the goal by themselves, they can ask other people to help them reach the goal, or they can abandon the goal entirely. This is a study about the second group of people – those who ask other people to help them pursue their goals. The goal of this study is to learn more about how people ask for help pursuing goals and how they communicate with the people who agree to help them. For the purposes of this study, *pursuer* refers to the person who sets the goal, initially fails to reach it, and asks another person for help reaching it, and *helper* refers to the person who works to help the pursuer achieve his or her goals.

Remember that your responses to all of these questions will remain anonymous and confidential – we do not know who you are, we cannot figure out who you are, and we will not share your responses with anyone. We are interested in your honest beliefs, experiences, and emotions, so please respond truthfully, accurately, and completely to each question.

Can you recall a time in the last three months when you had been a helper?

Please explain, in as much detail as possible, why you indicated you had not been a helper in the last three months.

Can you recall a time when in the last three months when you had been a pursuer?

Please explain, in as much detail as possible, why you indicated you had not been a pursuer in the last three months.

Questionnaire for Helpers

Goals and obstacles

Please describe, in as much detail as possible, the goal your pursuer asked you to help him or her reach.

Goal importance

The goal I described was important to my pursuer.

I cared about achieving my pursuer's goal.

My pursuer's goal meant a lot to me.

I valued my pursuer's goal.

My pursuer would have been unsafe if I didn't help my pursuer achieve his or her goal.

Achieving my pursuer's goal was important for my pursuer's self-esteem.
My pursuer needed to reach goal in order to be safe.
It would have been dangerous for my pursuer if I had not helped him or her reach the goal.
The goal I described was central to my pursuer's welfare.
Achieving the goal I described was essential for my pursuer's comfort.
My pursuer's security depended on achieving the goal I described.
The goal I described was central to my pursuer's happiness.
Achieving the goal I described would allow my pursuer to have a positive view of him- or herself.
Achieving the goal I described was important for my pursuer's satisfaction.

Now, we would like to know what kept your pursuer from reaching his or her goal. Please describe, in as much detail as possible, the obstacle(s) that kept your pursuer from reaching his or her goal.

Obstacle size

The obstacle(s) preventing my pursuer from reaching his or her goal seemed impossible to overcome on my own.
The size of the obstacle(s) did not intimidate me.
The size of the obstacle(s) overwhelmed me.
I was unafraid of how big the obstacle(s) were that separated my pursuer from the goal s/he wanted to achieve.
The obstacle(s) keeping my pursuer from the his/her goal were too large for me to handle by myself.
I was anxious about the size of the obstacle(s) that separated my pursuer from the goal s/he wanted to reach
I was worried about the size of the obstacle(s) that separated my pursuer from the goal s/he wanted to reach.

Finding and recruiting helpers

Now, we would like to know about you and your pursuer.

Please think back to the very first time you were became aware that your pursuer needed help. What made you aware that your pursuer needed your help to reach the goal s/he wanted to reach?
Please write the number of times your pursuer asked you to help him/her achieve his/her goals before you agreed to help him/her:

Please list indicate your pursuer's sex: Male | Female

Did you have a relationship with your pursuer prior to being asked to help him/her? No | Yes

If yes: Please describe the type of relationship you and the pursuer had
Please estimate the number of years _____ and months _____ you and the

pursuer were in the relationship you described.

Measure of communal strength (Mills et al., 2004)

How far would you be willing to go to visit your helper?

0: Not far at all, 9: As far as was required

How happy do you feel when doing something that helps your helper?

0: Not happy at all, 9: As happy as possible

How large a benefit would you be likely to give your helper?

0: No benefit at all, 9: As large a benefit as possible

How large a cost would you incur to meet a need of your helper?

0: No cost at all, 9: As large a cost as possible

How readily can you put the needs of your helper out of your thoughts?

0: Not readily at all, 9: As readily as possible

How high a priority for you is meeting the needs of your helper?

0: Not a priority at all, 9: As high a priority as possible

How reluctant would you be to sacrifice for your helper?

0: Not reluctant at all, 9: As reluctant as possible

How much would you be willing to give up to benefit your helper?

0: Nothing at all, 9: As much as possible

How far would you go out of your way to do something for your helper?

0: Not far at all, 9: As far as was required

How easily could you accept not helping your helper?

0: Not easily at all, 9: As easily as possible

How easily could you accept not helping your pursuer?

Helpers's motivations for helping

I agreed to help my pursuer because it sounded like I could have fun helping him/her try to reach his/her goals.

I agreed to help my pursuer because I was going to do something similar anyway, and helping my pursuer allowed me to complete two things at once.

I agreed to help my pursuer because helping him/her reach his/her goals sounded like an interesting challenge.

I agreed to help my pursuer because I had nothing better to do.

I agreed to help my pursuer because helping him/her reach his/her goals gave me an excuse to do things it wouldn't ordinarily be appropriate for me to do.

I agreed to help my pursuer because my pursuer helped me in the past and I wanted to repay him or her.

I agreed to help my pursuer because I knew I was going to want my pursuer to do something for me in the future.

I agreed to help my pursuer because our relationship is built on exchanging favors.
I agreed to help my pursuer because I wanted repay his/her a past kindness s/he showed me.
I agreed to help my pursuer because I wanted to make sure my pursuer owed me a favor I could cash in later on.
I agreed to help my pursuer because I wanted to make sure s/he was comfortable.
I agreed to help my pursuer because it was the right thing to do, not because I want to be paid back.
I did not care about how much effort it would take to help my pursuer – I just wanted to make sure s/he was all right.
I agreed to help my pursuer because I could tell s/he really needed the help and making sure that s/he was helped was the only thing I cared about.
I agreed to help my pursuer because supporting my pursuer's wellbeing is important.

Substitutability – helpers's skills, information, willingness

It would have been easy for almost anyone to help my pursuer achieve his/her goal.
I had skills many other people also had.
I did not need specialized information to help my pursuer reach his/her goal.
I used widely available information to help my pursuer reach his/her goal.
I used skills many other people had when I helped my pursuer reach his/her goal.
I provided help that few other people could have provided.
Few people had my skills, skills my pursuer needed to reach his/her goal.
Few people had my information, information my pursuer needed to reach his/her goal.
I provided help that few others could have provided.
I think many people would have been willing to help my pursuer reach his/her goal.
I think few people would have wanted to help my pursuer reach his/her goal.
I think that finding people who wanted to help my pursuer would have been easy.
Many people would have been happy to help my pursuer reach his/her goal.

What helpers did.

Now, we would to know what you did to help your pursuer.

Please describe, in as much detail as possible, what you did and said to help your

pursuer. Please include as many details as possible, such as describing any resources such as skills, access, information, or moral support you added to the situation that your pursuer did not have when s/he was alone, your primary duties, goals, and obligations, and how much work the you did to help your pursuer.

Now, we would like to know what you did, if anything, to help your pursuer use resources to pursue his/her goal.

I helped my pursuer make progress toward his/her goal by increasing the number of helpful resources s/he could access.

I helped my pursuer make progress toward his/her goal by making more resources available to my pursuer.

I helped my pursuer make progress toward his/her goal by giving him/her more resources my pursuer could use to pursue his/her goal.

I helped my pursuer make progress toward his/her goal by diversifying the kinds of resources my pursuer could access.

I helped my pursuer make progress toward his/her goal by helping my pursuer access new resources that s/he could not access before.

I helped my pursuer make progress toward his/her goal by helping my pursuer access resources that were different than the resources s/he could access before.

I helped my pursuer make progress toward his/her goal by teaching my pursuer how to use his/her resources more effectively.

I helped my pursuer make progress toward his/her goal by showing my pursuer better ways of using his/her resources.

I helped my pursuer make progress toward his/her goal by improving my pursuer's ability to use his/her resources.

Effectiveness – removing (remove, shrink to manageable, new path around), creating obstacles

I got rid of the obstacle(s) I described earlier.

I removed the obstacle(s) I described that kept my pursuer from reaching his/her goal.

I eliminated the obstacle(s) that separated my pursuer from his/her goal.

I decreased the size of the obstacle(s) I described earlier.

I made the obstacle(s) small enough for my pursuer to overcome.

I shrank the obstacle(s) that separated my pursuer from his/her goal.

I created additional obstacles.

I put more obstacles in my pursuer's way.

I added more obstacles that separated my pursuer from his/her goal.

I showed my pursuer a path around the obstacle(s) that s/he had not seen before I showed it to him/her.

I showed my pursuer options for overcoming the obstacle(s) that s/he had not considered before I showed them to him/her.

I offered plans for overcoming the obstacle(s) that were different that any-

thing my pursuer could have thought up.

Effectiveness – absolute

With my help, my pursuer successfully reached the goal I described earlier.
My help enabled my pursuer to achieve his/her goal.
Even with my help, my pursuer failed to achieve the goal s/he set out to achieve.
With my help, my pursuer achieved the goal s/he wanted to achieve.

I was effective.
My help was valuable.
I was ineffective.
My help was useful.
I was helpful.
My help was inadequate.
My help was beneficial.
I was productive.

Finally: What did your pursuer say or do to let you know that s/he no longer needed your help?

A helper [pursuer] is best described as:

- Someone who assists another person in reaching that person's goal
- Someone who wants to reach a goal but cannot reach it on his/her/their own
- Someone who has already reached his/her/their goal

This purpose of this item is to check whether you are still paying attention. If you are still paying attention, please choose 4 [8].
If you are still paying attention, please select 9 [2].

Traits and demographics

Self-esteem (Rosenberg, 1965)

On the whole, I am satisfied with myself.
At times I think I am no good at all.
I feel that I have a number of good qualities.
I am able to do things as well as most other people.
I feel I do not have much to be proud of.
I certainly feel useless at times.
I feel that I'm a person of worth, at least on an equal plane with others.
I wish I could have more respect for myself.
All in all, I am inclined to feel that I am a failure.
I take a positive attitude toward myself.

Helping attitudes scale (Nickell, 1998)

Helping others is usually a waste of time.
When given the opportunity, I enjoy aiding others who are in need.
If possible, I would return lost money to the rightful owner.
Helping friends and family is one of the great joys in life.
I would avoid aiding someone in a medical emergency if I could.
It feels wonderful to assist others in need.
Volunteering to help someone is very rewarding.
I dislike giving directions to strangers who are lost.
Doing volunteer work makes me feel happy.
I donate time or money to charities every month.
Unless they are part of my family, helping the elderly isn't my responsibility.
Children should be taught about the importance of helping others.
I plan to donate my organs when I die with the hope that they will help someone else live.
I try to offer my help with any activities my community or school groups are carrying out.
I feel at peace with myself when I have helped others.
If the person in front of me in the check-out line at a store was a few cents short, I would pay the difference.
I feel proud when I know that my generosity has benefited a needy person.
Helping people does more harm than good because they come to rely on others and not themselves.
I rarely contribute money to a worthy cause.
Giving aid to the poor is the right thing to do.

Need to belong (Leary, Kelly, Cottrell, & Schreindorfer, 2005)

If other people don't seem to accept me, I don't let it bother me.
I try hard not to do things that will make other people avoid or reject me.
I seldom worry about whether other people care about me.
I need to feel that there are people I can turn to in times of need.
I want other people to accept me.
I do not like being alone.
Being apart from my friends for long periods of time does not bother me.
I have a strong need to belong.
It bothers me a great deal when I am not included in other people's plans.
My feelings are easily hurt when I feel that others do not accept me.

The Big Five (John & Srivastava, 1999)

I see myself as someone who . . .
Is talkative
Tends to find fault with others

Does a thorough job
Is depressed, blue
Is original, comes up with new ideas
Is reserved
Is helpful and unselfish with others
Can be somewhat careless
Is relaxed, handles stress well
Is curious about many different things
Is full of energy
Starts quarrels with others
Is a reliable worker
Can be tense
Is ingenious, a deep thinker
Generates a lot of enthusiasm
Has a forgiving nature
Tends to be disorganized
Worries a lot
Has an active imagination
Tends to be quiet
Is generally trusting
Tends to be lazy
Is emotionally stable, not easily upset
Is inventive
Has an assertive personality
Can be cold and aloof
Perseveres until the task is finished
Can be moody
Values artistic, aesthetic experiences
Is sometimes shy, inhibited
Is considerate and kind to almost everyone
Does things efficiently
Remains calm in tense situations
Prefers work that is routine
Is outgoing, sociable
Is sometimes rude to others
Makes plans and follows through with them
Gets nervous easily
Likes to reflect, play with ideas
Has few artistic interests
Likes to cooperate with others
Is easily distracted
Is sophisticated in art, music, or literature

Empathy (Interpersonal reactivity index; Davis, 1980).

I daydream and fantasize, with some regularity, about things that might happen to me.
I often have tender, concerned feeling for people less fortunate than me.
I sometimes find it difficult to see things from the “other guy’s” point of view.
Sometimes I don’t feel very sorry for other people when they are having problems.
I really get involved with the feelings of the characters in a novel.
In emergency situations, I feel apprehensive and ill-at-ease.
I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.
I try to look at everybody's side of a disagreement before I make a decision.
When I see someone being taken advantage of, I feel kind of protective towards them.
I sometimes feel helpless when I am in the middle of a very emotional situation.
I sometimes try to understand my friends better by imagining how things look from their perspective.
Becoming extremely involved in a good book or movie is somewhat rare for me.
When I see someone get hurt, I tend to remain calm.
Other people's misfortunes do not usually disturb me a great deal.
If I'm sure I'm right about something, I don't waste much time listening to other people's arguments
After seeing a play or movie, I have felt as though I were one of the characters.
Being in a tense emotional situation scares me.
When I see someone being treated unfairly, I sometimes don't feel very much pity for them.
I am usually pretty effective in dealing with emergencies.
I am often quite touched by things that I see happen.
I believe that there are two sides to every question and try to look at them both.
I would describe myself as a pretty soft-hearted person.
When I watch a good movie, I can very easily put myself in the place of a leading character.
I tend to lose control during emergencies.
When I'm upset at someone, I usually try to "put myself in his shoes" for a while.
When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.
When I see someone who badly needs help in an emergency, I go to pieces.
Before criticizing somebody, I try to imagine how I would feel if I were in their place.

Your age (in years): _____

Your ethnicity: _____

Your sex: _____

Number of Instagram followers (if you need to, in a new browser tab, please log into your Instagram account to report the exact number of your Instagram followers):

Number people you follow on Instagram (if you need to, in a new browser tab, please log into your Instagram account to report the exact number of your Instagram followers):

Your romantic partners are typically:

0: Males
1: Mostly males
2: Both males and females
3: Mostly females
4: Females

Are you currently employed? Yes | No

If Yes: length of employment with current employer in years _____ and months _____.

Do you typically work 32 hours or more a week for your employer? No | Yes

Are you responsible for any dependents 18 years old or younger? No | Yes

If yes: How many dependents 18 years old or younger are you responsible for?

_____

How many of the dependents 18 years old or younger live primarily with you?

_____

Please indicate the highest level of level of education you have attained:

0: Less than high school
1: High school
2: Degree from a two-year degree program
3: Degree from a four-year program
4: Master's degree, juris doctor, or professional certificate equivalent (e.g., CPA)
5: Doctorate

Please indicate your relationship status:

0: Single – not dating anyone
1: Dating one person
2: Dating multiple people
3: Engaged
4: Married
5: Divorced
6: Widowed

If applicable, length of relationship in years _____ and months _____.

If you are participating in this study for class credit, please write your six-digit SONA ID here: _____

Thank you very much for participating in this study.

Questionnaire for Pursuers

Goals and obstacles

Please describe, in as much detail as possible, the goal you wanted to pursue and why you wanted to pursue it.

Goal importance

The goal I described was important to me.
I cared about achieving the goal I described.
The goal I described meant a lot to me.
I valued the goal I pursued.
I would have been unsafe if I didn't achieve the goal I described.
Achieving the goal I described was important for my self-esteem.
I needed to reach the goal I described in order to be safe.
It would have been dangerous for me if I had not reached the goal I described.
The goal I described was central to my welfare.
Achieving the goal I described was essential for my comfort.
My security depended on achieving the goal I described.
The goal I described was central to my happiness.
Achieving the goal I described would allow me to have a positive view of myself.
Achieving the goal I described was important for my satisfaction.

Now, we would like to know about what kept you from reaching your goal. Please describe, in as much detail as possible, the obstacle(s) that kept you from reaching the goal you described.

Obstacle size

The obstacle(s) preventing me from reaching the goal I described seemed impossible to overcome on my own.
The size of the obstacle(s) I described did not intimidate me.
The size of the obstacle(s) I described overwhelmed me.
I was unafraid of how big the obstacle(s) were that separated me from the goal I wanted to achieve.

The obstacle(s) keeping me from the goal I described were too large for me to handle by myself.
I was anxious about the size of the obstacle(s) that separated me from the goal I wanted to reach
I was worried about the size of the obstacle(s) that separated me from the goal I wanted to reach.

Finding and recruiting helpers

Now, we would like to know about how you recruited your helper – that is, we want to know about how you asked your helper for help.

Please think back to before you asked your helper for help. We would like to know about the very first time you realized that you needed to ask someone else for help reaching your goal. What made you realize that you needed someone else's help to reach the goal you wanted to attain?
Please write the number of times you tried by yourself to reach the goal before asking someone else for help:

Now, we would like to know about what happened after you realized you needed help reaching your goal but before you asked your helper for his/her help.
Did you consider asking person(s) other than your helper to help you with this matter? No | Yes

If YES: Please write the number of other person(s) whom you considered asking for help:

Substitutability – effort to find a helper

I put a lot of effort into finding someone who could help me reach my goal.
It took me a long time to find someone to help me reach my goal.
It was easy for me to find someone who could help me reach my goal.
It took a lot of work to find someone who could help me reach my goal.
I didn't have to look very hard to find someone who could help me reach my goal.

Substitutability – helpers's skills, information, willingness

It would have been easy for almost anyone to help me achieve this goal.
The person who helped me reach my goal had skills many other people also had.
People did not need specialized information to help me reach my goal.
Few people had the skills I needed to reach my goal.
Few people had the information I needed to reach my goal.
The person who helped me reach my goal had information widely available elsewhere.
The person who helped me reach my goal had skills many other people

had.
The person who helped me reach my goal provided help few others could have provided.
Many people would have been willing to help me reach my goal.
Few people would have wanted to help me reach my goal.
Finding people who had the desire to help me reach my goal was easy.
Many people would have been happy to help me reach my goal.

Please describe how you made the helper aware that you needed his or her help to pursue your goal.
Please list indicate your helper's sex: Male | Female
Did you have a relationship with your helper prior to asking him or her to help you? No | Yes
If yes: Please describe the type of relationship you and the helper had
Please estimate the number of years _____ and months _____ you and the helper were in the relationship you described.
Measure of communal strength (Mills et al., 2004)
How far would you be willing to go to visit your helper?
0: Not far at all, 9: As far as was required
How happy do you feel when doing something that helps your helper?
0: Not happy at all, 9: As happy as possible
How large a benefit would you be likely to give your helper?
0: No benefit at all, 9: As large a benefit as possible
How large a cost would you incur to meet a need of your helper?
0: No cost at all, 9: As large a cost as possible
How readily can you put the needs of your helper out of your thoughts?
0: Not readily at all, 9: As readily as possible
How high a priority for you is meeting the needs of your helper?
0: Not a priority at all, 9: As high a priority as possible
How reluctant would you be to sacrifice for your helper?
0: Not reluctant at all, 9: As reluctant as possible
How much would you be willing to give up to benefit your helper?
0: Nothing at all, 9: As much as possible
How far would you go out of your way to do something for your helper?
0: Not far at all, 9: As far as was required
How easily could you accept not helping your helper?
0: Not easily at all, 9: As easily as possible
Please write the number of times you asked your helper for help before the s/he agreed to help you:
Was the helper who helped you the first person you asked for help? No | Yes

If NO: Think about the person(s) who declined to help you. How many person(s) declined to help you?

Please list the reason(s), if any, the person(s) give you for declining to help you.

Now think about the person(s) who did help you. Please list your reason(s) for asking that person for help.

If YES: Please list your reason(s) for asking that person for help.

Now, we would like to know the truth about what you thought and how you felt just after your helper agreed to help you.

Substitutability – certainty about helper's ability to help

Once I found my helper, I was certain s/he had what it took to help me reach my goal.

I was confident that my helper was going to be able to help me reach my goal.

I was doubted whether my helper had what it took to help me reach my goal.

I was positive my helper was going to be able to help me succeed.

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Interested
Distressed
Excited
Upset
Strong
Guilty
Scared
Hostile
Enthusiastic
Proud
Irritable
Alert
Ashamed
Inspired
Nervous
Determined
Attentive
Jittery
Active
Afraid

Relieved
Reassured
Hopeful
Optimistic

What helpers did.

Now, we would to know about what your helper did to help you.

Please describe, in as much detail as possible, what your helper did and said to help you. Please include as many details as possible, such as describing any resources such as skills, access, information, or moral support your helper added to the situation, and how much work the helper did to help you.

Now, we would like to know what your helper did, if anything, to help you use resources to pursue your goal.

My helper helped me pursue my goal by increasing the number of helpful resources I could access.

My helper helped me pursue my goal by making more resources available to me.

My helper helped me pursue my goal by giving me more resources I could use to pursue my goal.

My helper helped me pursue my goal by diversifying the kinds of resources I could access.

My helper helped me pursue my goal by helping me access new resources that I could not access before.

My helper helped me pursue my goal by helping me access me resources that were different than the resources I could access before.

My helper helped me pursue my goal by teaching me how to use my resources more effectively.

My helper helped me pursue my goal by showing me better ways of using my resources.

My helper helped me pursue my goal by improving my ability to use my resources.

Effectiveness – removing (remove, shrink to manageable, new path around), creating obstacles

My helper got rid of the obstacle(s) I described earlier.

My helper removed the obstacle(s) I described that kept me from reaching my goal.

My helper eliminated the obstacle(s) I described that separated me from my goal.

My helper decreased the size of the obstacle(s) I described earlier.

My helper made the obstacle(s) small enough for me to overcome.

My helper shrank the obstacle(s) that separated me from my goal.

My helper created additional obstacles.

My helper put more obstacles in my way.

My helper added more obstacles that separated me from my goal.
My helper showed me a path around the obstacle(s) that I had not seen before my helper showed it to me.
My helper showed options for overcoming the obstacle(s) that I had not considered before the helper showed them to me.
My helper offered plans for overcoming the obstacle(s) that were different that anything I could have thought up.

Effectiveness – absolute

With my helper's help, I successfully reached the goal I described earlier.
My helper's help enabled me to achieve my goal.
Even with my helper's help, I failed to achieve the goal I set out to achieve.
With my helper's help, I achieved the goal I wanted to achieve.

My helper was effective.
My helper's help was valuable.
My helper was ineffective.
My helper's help was useful.
My helper was helpful.
My helper's help was inadequate.
My helper's help was beneficial.
My helper was productive.

Finally: What did you say or do to let your helper know you no longer needed his or help?

A helper [pursuer] is best described as:

- Someone who assists another person in reaching that person's goal
- Someone who wants to reach a goal but cannot reach it on his/her/their own
- Someone who has already reached his/her/their goal

This purpose of this item is to check whether you are still paying attention. If you are still paying attention, please choose 4 [8].
If you are still paying attention, please select 9 [2].

Traits and demographics

Self-esteem (Rosenberg, 1965)

On the whole, I am satisfied with myself.
At times I think I am no good at all.
I feel that I have a number of good qualities.
I am able to do things as well as most other people.
I feel I do not have much to be proud of.
I certainly feel useless at times.
I feel that I'm a person of worth, at least on an equal plane with others.
I wish I could have more respect for myself.
All in all, I am inclined to feel that I am a failure.
I take a positive attitude toward myself.

Helping attitudes scale (Nickell, 1998)

Helping others is usually a waste of time.
When given the opportunity, I enjoy aiding others who are in need.
If possible, I would return lost money to the rightful owner.
Helping friends and family is one of the great joys in life.
I would avoid aiding someone in a medical emergency if I could.
It feels wonderful to assist others in need.
Volunteering to help someone is very rewarding.
I dislike giving directions to strangers who are lost.
Doing volunteer work makes me feel happy.
I donate time or money to charities every month.
Unless they are part of my family, helping the elderly isn't my responsibility.
Children should be taught about the importance of helping others.
I plan to donate my organs when I die with the hope that they will help someone else live.
I try to offer my help with any activities my community or school groups are carrying out.
I feel at peace with myself when I have helped others.
If the person in front of me in the check-out line at a store was a few cents short, I would pay the difference.
I feel proud when I know that my generosity has benefited a needy person.
Helping people does more harm than good because they come to rely on others and not themselves.
I rarely contribute money to a worthy cause.
Giving aid to the poor is the right thing to do.

Need to belong (Leary, Kelly, Cottrell, & Schreindorfer, 2005)

If other people don't seem to accept me, I don't let it bother me.
I try hard not to do things that will make other people avoid or reject me.

I seldom worry about whether other people care about me.
I need to feel that there are people I can turn to in times of need.
I want other people to accept me.
I do not like being alone.
Being apart from my friends for long periods of time does not bother me.
I have a strong need to belong.
It bothers me a great deal when I am not included in other people's plans.
My feelings are easily hurt when I feel that others do not accept me.

The Big Five (John & Srivastava, 1999)

I see myself as someone who . . .
Is talkative
Tends to find fault with others
Does a thorough job
Is depressed, blue
Is original, comes up with new ideas
Is reserved
Is helpful and unselfish with others
Can be somewhat careless
Is relaxed, handles stress well
Is curious about many different things
Is full of energy
Starts quarrels with others
Is a reliable worker
Can be tense
Is ingenious, a deep thinker
Generates a lot of enthusiasm
Has a forgiving nature
Tends to be disorganized
Worries a lot
Has an active imagination
Tends to be quiet
Is generally trusting
Tends to be lazy
Is emotionally stable, not easily upset
Is inventive
Has an assertive personality
Can be cold and aloof
Perseveres until the task is finished
Can be moody
Values artistic, aesthetic experiences
Is sometimes shy, inhibited
Is considerate and kind to almost everyone

Does things efficiently
Remains calm in tense situations
Prefers work that is routine
Is outgoing, sociable
Is sometimes rude to others
Makes plans and follows through with them
Gets nervous easily
Likes to reflect, play with ideas
Has few artistic interests
Likes to cooperate with others
Is easily distracted
Is sophisticated in art, music, or literature

Empathy (Interpersonal reactivity index; Davis, 1980).

I daydream and fantasize, with some regularity, about things that might happen to me.
I often have tender, concerned feeling for people less fortunate than me.
I sometimes find it difficult to see things from the “other guy’s” point of view.
Sometimes I don’t feel very sorry for other people when they are having problems.
I really get involved with the feelings of the characters in a novel.
In emergency situations, I feel apprehensive and ill-at-ease.
I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.
I try to look at everybody's side of a disagreement before I make a decision.
When I see someone being taken advantage of, I feel kind of protective towards them.
I sometimes feel helpless when I am in the middle of a very emotional situation.
I sometimes try to understand my friends better by imagining how things look from their perspective.
Becoming extremely involved in a good book or movie is somewhat rare for me.
When I see someone get hurt, I tend to remain calm.
Other people's misfortunes do not usually disturb me a great deal.
If I'm sure I'm right about something, I don't waste much time listening to other people's arguments
After seeing a play or movie, I have felt as though I were one of the characters.
Being in a tense emotional situation scares me.
When I see someone being treated unfairly, I sometimes don't feel very much pity for them.
I am usually pretty effective in dealing with emergencies.
I am often quite touched by things that I see happen.
I believe that there are two sides to every question and try to look at them both.
I would describe myself as a pretty soft-hearted person.

When I watch a good movie, I can very easily put myself in the place of a leading character.
I tend to lose control during emergencies.
When I'm upset at someone, I usually try to "put myself in his shoes" for a while.
When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.
When I see someone who badly needs help in an emergency, I go to pieces.
Before criticizing somebody, I try to imagine how I would feel if I were in their place.

Your age (in years): _____

Your ethnicity: _____

Your sex: _____

Number of Instagram followers (if you need to, in a new browser tab, please log into your Instagram account to report the exact number of your Instagram followers):

Number people you follow on Instagram (if you need to, in a new browser tab, please log into your Instagram account to report the exact number of your Instagram followers):

Your romantic partners are typically:
0: Males
1: Mostly males
2: Both males and females
3: Mostly females
4: Females

Are you currently employed? Yes | No
If Yes: length of employment with current employer in years _____ and months _____.
Do you typically work 32 hours or more a week for your employer? No | Yes

Are you responsible for any dependents 18 years old or younger? No | Yes
If yes: How many dependents 18 years old or younger are you responsible for?
_____
How many of the dependents 18 years old or younger live primarily with you?
_____

Please indicate the highest level of level of education you have attained:
0: Less than high school
1: High school

2: Degree from a two-year degree program
3: Degree from a four-year program
4: Master's degree, juris doctor, or professional certificate equivalent (e.g., CPA)
5: Doctorate

Please indicate your relationship status:
0: Single – not dating anyone
1: Dating one person
2: Dating multiple people
3: Engaged
4: Married
5: Divorced
6: Widowed

If applicable, length of relationship in years _____ and months _____.

If you are participating in this study for class credit, please write your six-digit SONA ID here: _____

Thank you very much for participating in this study.

Questionnaire for People Who Were Neither Helpers Nor Pursuers

A helper [pursuer] is best described as:
- Someone who assists another person in reaching that person's goal
- Someone who wants to reach a goal but cannot reach it on his/her/their own
- Someone who has already reached his/her/their goal

This purpose of this item is to check whether you are still paying attention. If you are still paying attention, please choose 4 [8].
If you are still paying attention, please select 9 [2].

Traits and demographics
Self-esteem (Rosenberg, 1965)
On the whole, I am satisfied with myself.
At times I think I am no good at all.
I feel that I have a number of good qualities.
I am able to do things as well as most other people.
I feel I do not have much to be proud of.
I certainly feel useless at times.

I feel that I'm a person of worth, at least on an equal plane with others.
I wish I could have more respect for myself.
All in all, I am inclined to feel that I am a failure.
I take a positive attitude toward myself.

Helping attitudes scale (Nickell, 1998)

Helping others is usually a waste of time.
When given the opportunity, I enjoy aiding others who are in need.
If possible, I would return lost money to the rightful owner.
Helping friends and family is one of the great joys in life.
I would avoid aiding someone in a medical emergency if I could.
It feels wonderful to assist others in need.
Volunteering to help someone is very rewarding.
I dislike giving directions to strangers who are lost.
Doing volunteer work makes me feel happy.
I donate time or money to charities every month.
Unless they are part of my family, helping the elderly isn't my responsibility.
Children should be taught about the importance of helping others.
I plan to donate my organs when I die with the hope that they will help someone else live.
I try to offer my help with any activities my community or school groups are carrying out.
I feel at peace with myself when I have helped others.
If the person in front of me in the check-out line at a store was a few cents short, I would pay the difference.
I feel proud when I know that my generosity has benefited a needy person.
Helping people does more harm than good because they come to rely on others and not themselves.
I rarely contribute money to a worthy cause.
Giving aid to the poor is the right thing to do.

Need to belong (Leary, Kelly, Cottrell, & Schreindorfer, 2005)

If other people don't seem to accept me, I don't let it bother me.
I try hard not to do things that will make other people avoid or reject me.
I seldom worry about whether other people care about me.
I need to feel that there are people I can turn to in times of need.
I want other people to accept me.
I do not like being alone.
Being apart from my friends for long periods of time does not bother me.
I have a strong need to belong.
It bothers me a great deal when I am not included in other people's plans.
My feelings are easily hurt when I feel that others do not accept me.

The Big Five (John & Srivastava, 1999)

I see myself as someone who . . .

Is talkative
Tends to find fault with others
Does a thorough job
Is depressed, blue
Is original, comes up with new ideas
Is reserved
Is helpful and unselfish with others
Can be somewhat careless
Is relaxed, handles stress well
Is curious about many different things
Is full of energy
Starts quarrels with others
Is a reliable worker
Can be tense
Is ingenious, a deep thinker
Generates a lot of enthusiasm
Has a forgiving nature
Tends to be disorganized
Worries a lot
Has an active imagination
Tends to be quiet
Is generally trusting
Tends to be lazy
Is emotionally stable, not easily upset
Is inventive
Has an assertive personality
Can be cold and aloof
Perseveres until the task is finished
Can be moody
Values artistic, aesthetic experiences
Is sometimes shy, inhibited
Is considerate and kind to almost everyone
Does things efficiently
Remains calm in tense situations
Prefers work that is routine
Is outgoing, sociable
Is sometimes rude to others
Makes plans and follows through with them
Gets nervous easily
Likes to reflect, play with ideas
Has few artistic interests

Likes to cooperate with others
Is easily distracted
Is sophisticated in art, music, or literature

Empathy (Interpersonal reactivity index; Davis, 1980).

I daydream and fantasize, with some regularity, about things that might happen to me.
I often have tender, concerned feeling for people less fortunate than me.
I sometimes find it difficult to see things from the "other guy's" point of view.
Sometimes I don't feel very sorry for other people when they are having problems.
I really get involved with the feelings of the characters in a novel.
In emergency situations, I feel apprehensive and ill-at-ease.
I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.
I try to look at everybody's side of a disagreement before I make a decision.
When I see someone being taken advantage of, I feel kind of protective towards them.
I sometimes feel helpless when I am in the middle of a very emotional situation.
I sometimes try to understand my friends better by imagining how things look from their perspective.
Becoming extremely involved in a good book or movie is somewhat rare for me.
When I see someone get hurt, I tend to remain calm.
Other people's misfortunes do not usually disturb me a great deal.
If I'm sure I'm right about something, I don't waste much time listening to other people's arguments
After seeing a play or movie, I have felt as though I were one of the characters.
Being in a tense emotional situation scares me.
When I see someone being treated unfairly, I sometimes don't feel very much pity for them.
I am usually pretty effective in dealing with emergencies.
I am often quite touched by things that I see happen.
I believe that there are two sides to every question and try to look at them both.
I would describe myself as a pretty soft-hearted person.
When I watch a good movie, I can very easily put myself in the place of a leading character.
I tend to lose control during emergencies.
When I'm upset at someone, I usually try to "put myself in his shoes" for a while.
When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.
When I see someone who badly needs help in an emergency, I go to pieces.
Before criticizing somebody, I try to imagine how I would feel if I were in their place.

Your age (in years): _____

Your ethnicity: _____

Your sex: _____

Number of Instagram followers (if you need to, in a new browser tab, please log into your Instagram account to report the exact number of your Instagram followers):

Number people you follow on Instagram (if you need to, in a new browser tab, please log into your Instagram account to report the exact number of your Instagram followers):

Your romantic partners are typically:

0: Males
1: Mostly males
2: Both males and females
3: Mostly females
4: Females

Are you currently employed? Yes | No

If Yes: length of employment with current employer in years _____ and months _____.

Do you typically work 32 hours or more a week for your employer? No | Yes

Are you responsible for any dependents 18 years old or younger? No | Yes

If yes: How many dependents 18 years old or younger are you responsible for? _____

How many of the dependents 18 years old or younger live primarily with you? _____

Please indicate the highest level of level of education you have attained:

0: Less than high school
1: High school
2: Degree from a two-year degree program
3: Degree from a four-year program
4: Master's degree, juris doctor, or professional certificate equivalent (e.g., CPA)
5: Doctorate

Please indicate your relationship status:

0: Single – not dating anyone
1: Dating one person
2: Dating multiple people

3: Engaged
4: Married
5: Divorced
6: Widowed

If applicable, length of relationship in years _____ and months _____.

If you are participating in this study for class credit, please write your six-digit SONA ID here: _____

Thank you very much for participating in this study.

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